

Product brochure

ECHO BARRIER®
Environmentally Sound



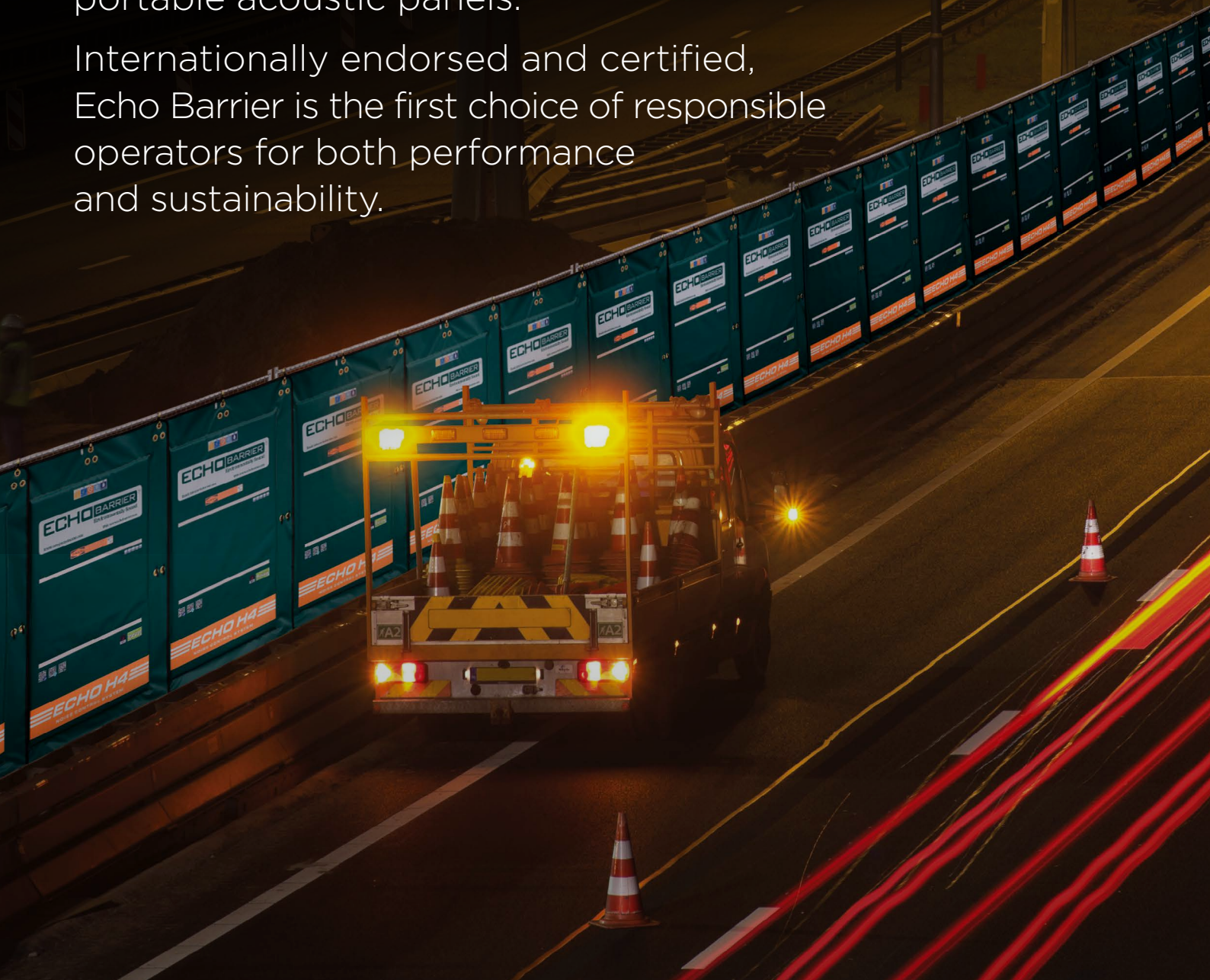
ECHO BARRIER®
Environmentally Sound
echobarrier.com Web: www.echobarrier.com

WARNING



Echo Barrier leads the world in combating noise pollution with its modular system of portable acoustic panels.

Internationally endorsed and certified, Echo Barrier is the first choice of responsible operators for both performance and sustainability.





Intelligent noise management

All over the world, in the most diverse circumstances, projects and events generate noise as they achieve their objectives. Whatever the nature and scale of the challenge, Echo Barrier is ready to respond to the threat of noise pollution with acoustic panels that offer proven protection for operations teams and the general public.

Through the application of science and innovative, practical thinking, Echo Barrier has radically transformed options for controlling noise. As we design, test, manufacture and distribute our products, constantly refining and improving them, we are guided by our commitment to the highest levels of quality and integrity. The value of Echo Barrier's modular system lies first and foremost in unrivalled noise absorption, but also in exceptional portability, flexibility and resilience. Our consistent aim is to offer unbeatable all-round performance.

This is why Echo Barrier's products make immediate and sustainable business sense for our clients – people who, in the broadest sense, take their responsibilities seriously. We will continue to devote our expertise and our energy to ensuring that Echo Barrier remains their indisputable choice.

Peter Wilson

Peter Wilson,
Technical Director, Echo Barrier
BSC Mech. Eng. Hons. MSC
Sound and Vibration. MIOA

Living with noise

As the World Health Organization wrote in 2011:

“Noise pollution is considered not only an environmental nuisance but also a threat to public health.”

It is estimated that more than 30% of the population is regularly exposed to noise that has a negative impact on well-being, with stress and cardio-vascular disease among the associated risks.

But life goes on, and noise is very much part of it as buildings are constructed or demolished, transport systems are extended and repaired, energy is sourced and generated and public events are staged.

We take a realistic, but positive approach.

Our commitment is both to combating noise pollution and to enhancing the sustainability of projects and businesses that unavoidably produce high levels of noise. The key to success in achieving both these aims is the practical, responsible application of innovative, world-leading technology.



Success through acoustic science

When it comes to the science of acoustics, there are three key factors in the success of Echo Barrier's panels in controlling noise:

Geometry

Echo Barrier's innovative panels are compact, lightweight and portable. They can be readily placed in the ideal position relative to the noise source, creating an acoustic shadow that will 'capture' the noise to maximum effect.

Noise absorption

Echo Barrier's panels are designed to absorb noise, never simply reflecting it as wood or metal barriers do. When noise is reflected, it can reverberate, aggravating noise pollution.

Barrier mass

The mass of a barrier influences its ability to mitigate noise. Echo Barrier's panels strike an optimum balance between mass, weight and dimensions.

They are designed to be double or triple-layered to increase overall mass when circumstances demand it.



World-class performance



Acoustic performance

Through the application of patented acoustic technology Echo Barrier's acoustic panels absorb noise and prevent reverberation. In laboratory tests the multi-purpose panels have achieved noise reduction of up to 43 decibels – that is more than 99.99% of noise energy. Even greater noise reduction has been recorded during the testing of panels designed for specialist purposes.

Optimised for mass and weight, Echo Barrier's compact and resilient panels are easy to deploy, handle, transport and store. They are recognized by both the Noise Abatement Society and the Institute of Acoustics, and have won numerous international awards.



Deployment

Echo Barrier's portable acoustic panels, which form a modular system, are lightweight, compact and durable. Designed for easy transportation and quick installation and disassembly – even by a single operative – they are readily fitted onto any structure, typically solid or mesh fencing or scaffolding.

The panels can be configured, combined and layered to respond to the particular conditions and challenges of a project. To create an acoustic curtain or wall, they can be linked both vertically and laterally, or doubled up in thickness for additional noise mitigation.



Manufacturing

The highest standards apply throughout Echo Barrier's sourcing of materials and its manufacturing process, which takes place at facilities in North America and Europe. The acoustic panels are hand-finished to ensure both outstanding long-term performance and unrivaled quality of visual presentation.



Durability

Echo Barrier's acoustic panels are built to last. With their resilient PVC exterior and heavy-duty grommets, they are designed for durability under tough conditions. They can be relied upon for years of efficient noise management.

Please note: When deploying Echo Barrier's system, please follow the installation instructions supplied using the following QR code.



High-performing materials and construction

The unrivaled all-round performance of Echo Barrier's portable acoustic panels derives first and foremost from their capacity for absorbing noise. This is complemented by their exceptional resilience and durability and their high standards of visual presentation.

As an example, image shows cross-section of Echo Barrier H10.



Front outer layer

Extremely durable, high-quality waterproof PVC, of optimum mass to achieve maximum noise mitigation, also offering an impressive visual finish.



Noise-absorbent composite

The heart of the panel: Echo Barrier's lightweight, but highly noise-absorbent composite. At certain frequencies it absorbs 100% of noise.



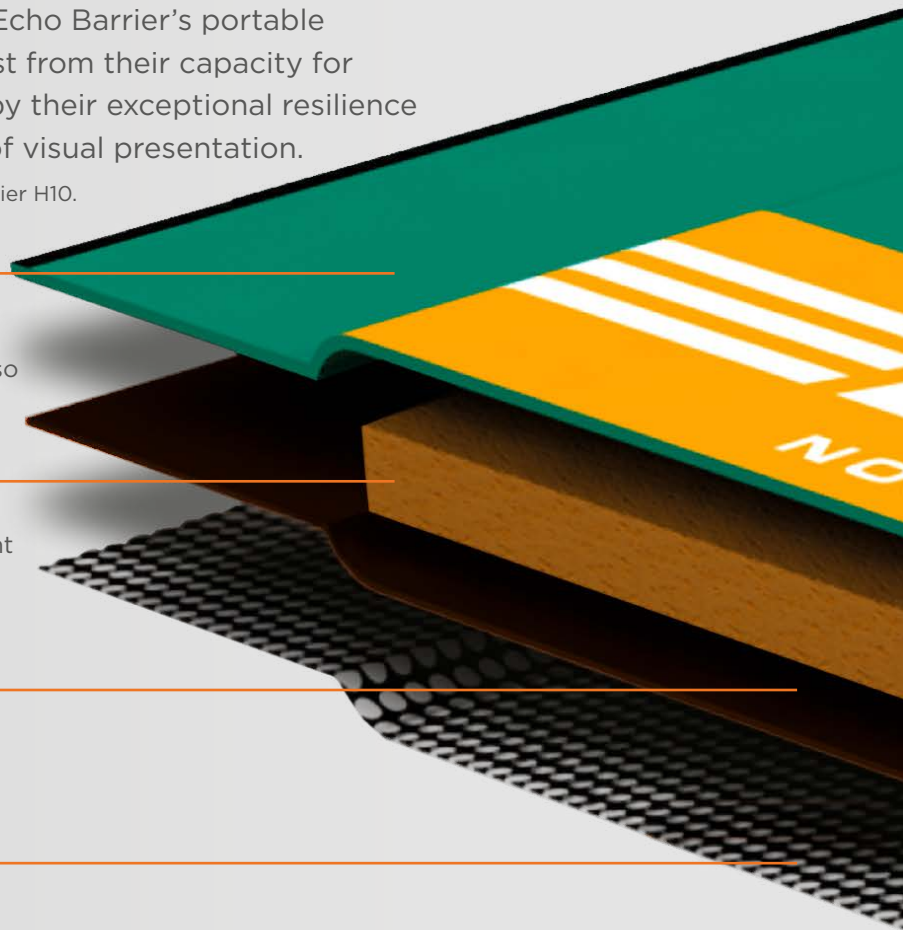
Waterproof breathable membrane

The membrane lets in sound, so that it can be absorbed by the composite, but keeps water out.



Durable reinforced mesh

The mesh protects the panel in tough working environments without compromising its acoustic performance.



Safety and fireproofing

Echo Barrier’s acoustic panels are compact, lightweight and safe to handle: they contain no fiberglass or hazardous materials. To maximize safety at night-time or in dark areas they are fitted with 2 horizontal reflector strips. ASTM E84 and BS 7838-1996 fire tests have been carried out on Echo Barrier’s entire H-series range of panels.

Resistance to water and extremes of temperature

Independent tests prove that Echo Barrier’s acoustic panels are waterproof: they do not absorb water when exposed to heavy rain or when jet-washed. They have also been proven to withstand extremes of temperatures – from 160°F (70°C) down to minus 40°.

Environmental awareness

Echo Barrier’s products contain no hazardous substances and are constructed using substantial proportions of recycled material. Waste is minimized through Echo Barrier’s buy-back scheme: any acoustic panels returned at the end of their lifecycle are recycled in accordance with strict guidelines from the Carbon Trust. Echo Barrier, which has been awarded a 5-star rating for its carbon footprint, adheres to the ISO 14001 Environmental Management Standard.

Industry standards

Echo Barrier’s H Series products comply with the following international standards.

Water-resistant test standard	BSEN 60529:1992 IPX6 / IPX9
Fire-resistant test standard	BS 7837-1996, ASTM E84
Dust-resistant test standard	BSEN 60529-1992
Cold-resistant test standard (result)	BSEN 60068/2/1:2007 (-40 degrees)
Tensile test standard (result)	ISO 17025
UV-resistant	3 years (USA + Canada), 5 years (rest of the world)

Corporate image

Beyond their acoustic, physical and environmental performance, Echo Barrier's acoustic panels offer aesthetic benefits. Designed to carry corporate branding, they are built to maintain their appearance over time, so they consistently convey a positive message.



The responsible choice

Echo Barrier's products reflect a conscientious corporate stance on workforce, community and the environment. By minimizing the potential for noise pollution in even the most noise-reflective zones, Echo Barrier's clients protect the health and well-being of their operatives and the surrounding communities.

They can also be confident of dealing with a business partner that is scrupulous in its testing, sourcing and manufacturing: Echo Barrier, formally recognized with numerous awards and accreditations, is internationally endorsed and certified. The company's products represent a wise commercial option: their all-round high performance

favors intelligent noise management, thus enhancing the cost-effectiveness and sustainability of projects.

Organizations that choose Echo Barrier are making the right decision when it comes to fulfilling their professional and corporate responsibilities.



Across industry sectors

Echo Barrier offers high-performance, cost-effective noise management across a multitude of projects – urgent, short-term and long-term – in diverse industry sectors.

By putting their confidence in Echo Barrier's modular system of acoustic panels, project teams can enhance their efficiency in meeting the imperatives of schedule and budget. For instance, they can extend working hours – maybe even continuing overnight – or use heavier equipment without causing extra disruption.

Echo Barrier's acoustic panels have proved their value in such sectors as:

Construction

Demolition

Industry

Manufacturing

Infrastructure

**Generators &
Power sources**

Road

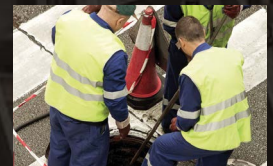
Rail

Utilities

Oil & gas

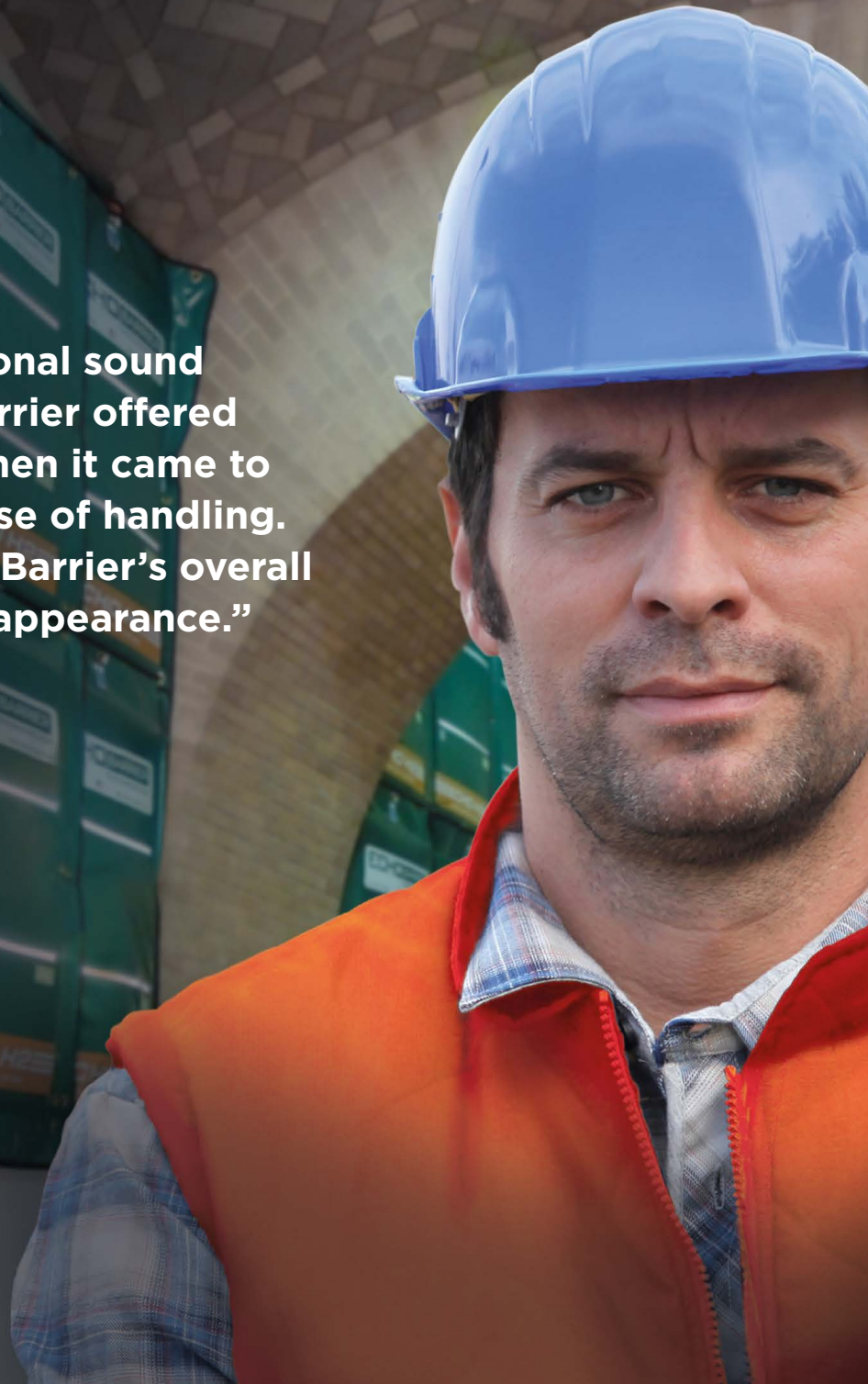
Mining

Public events



“Compared to a conventional sound ‘blanket’ system, Echo Barrier offered significant differences when it came to weight, durability and ease of handling. I was impressed by Echo Barrier’s overall quality and professional appearance.”

Kevin Gleckler, Site Superintendent
Judlau Contracting, Inc





Echo Barrier helps to quiet construction of Second Avenue Subway in New York City

Supporting a monumental undertaking in public transit

The Metropolitan Transit Authority (MTA) rebooted construction of the long-envisioned Second Avenue subway line in 2007 to reduce congestion in the East Side subway system, which currently lacks capacity to keep up with high demand for transit. Construction of the subway tunnels, which occurs in Manhattan's densely populated East Side, can be disruptive to neighboring residents and businesses. Noise is unavoidably emitted by the drilling and excavation of the tunnels.

Providing calm and quiet for New York City's East Side

The MTA and contractor Judlau Contracting were conscious of the enormous degree of sound produced by heavy equipment and work being done in a confined site parameter. They sought to be considerate to the communities' need for peace and quiet, and reached out to Echo Barrier for a heavy duty and durable noise barrier system that would be effective and easy to hang or move throughout the construction site.

A durable solution to disruptive noise

Kevin Gleckler, Judlau Site Superintendent, had also worked with the conventional sound 'blanket' system, so he was quick to recognize the significant differences between these and the Echo Barriers – in weight, durability and ease of handling. Mr Gleckler went on to recount instances where the conventional 'blankets' ripped and tore off the fence with the first strong wind, whereas the Echo Barriers stayed right in place. He was impressed – not only with the heavy duty grommets that kept the barriers in place but also with their overall quality and professional appearance. Mr Gleckler's final observation was on cost and his frustration that those blankets that ripped off 'were not cheap!'.

After the Echo Barriers were installed, there was a dramatic reduction to 30dB. The ‘airplane noise’ became a “slight and tolerable hum”. Echo Barrier enabled NSTAR to continue use of a critical transformer.

Epsilon Associates



NSTAR Electric, Westwood, Massachusetts

The cooling fans on this 30m year old mobile transformer on an NSTAR substation were generating what local Framingham residents called “an unbearable level of noise”, likened to “an airplane flying low overhead”. This problem cast doubt on whether it would be possible to continue using this critical transformer.

NSTAR had tried various sound reduction methods without success. They then installed Echo Barriers round the substation on 3 sides. These sound absorbing barriers had a dramatic effect, reducing the noise radiated into the community by up to 96% (14dB).

As a result, residents confirmed that the “intolerable airplane noise” had become a “slight and tolerable hum”. The success of the Echo Barrier installation meant that NSTAR could continue to use this important asset.

Independent Noise Testing

The performance of the barriers was independently tested by Epsilon Associates on behalf of NSTAR.



Extra-rapid deployment
on large-scale projects

H8™ ACOUSTIC BARRIER
(specialist applications)

Key feature:

- The size of three standard barriers
- Rapid deployment across large zones



Noise reduction
up to 37dB+



Outstanding
noise absorption



Fire
resistance



Water
resistance



UV resistance



Sub-zero
resistance



High-performance barrier

H9™ ACOUSTIC BARRIER

Key feature:

- Exceptional noise reduction and absorption
- Best results in ASTM E84 fire tests
- Most popular in the range
- Light and easy to deploy in difficult conditions



Noise reduction
up to 43dB+



Outstanding
noise absorption



Fire
resistance



Water
resistance



Tensile
strength



Durability



Lightweight



UV resistance



Sub-zero
resistance



ASTM
E84



BSI



ISO



Absorbs noise from all sides

TB6 SONIC™ SOUND ABSORBER (specialist applications)

Key feature:

- Absorbs noise from both sides across a very large range of frequencies
- Suitable for indoor use and for areas with high levels of noise reflection



Outstanding
noise absorption



Fire
resistance



Lightweight



UV resistance



Sub-zero
resistance



RFID
security



BSI



ISO



Ultimate overall performance

H10™ ACOUSTIC BARRIER

Key feature:

- Most versatile barrier, offering highest all-round performance
- Portable, flexible, durable, and adaptable
- Suited to all applications, above all in rugged, challenging and wet environments
- Superior noise reduction and absorption



Noise reduction
up to 43.4 dB



Outstanding
noise absorption



Fire
resistance



Water
resistance



Tensile
strength



Durability



Lightweight



UV resistance



Sub-zero
resistance



ASTM
E84



BSI



ISO



Simple, flexible & effective temporary noise management

H20™ ACOUSTIC ENCLOSURE

Installed in just 15 minutes, the H20™ acoustic enclosure provides simple, flexible and effective temporary noise management.

The enclosure, which measures 7ft 4in x 7ft 5in (2.25m x 2.3m), offers noise reduction and absorption in every direction, which makes it ideal for works inside buildings or next to high-rise structures. It is supplied with all the necessary components to prevent noise from bouncing off ceilings and walls, and to contain dust, debris and fumes, while providing a safe working environment.



World-beating noise reduction & site safety

CS CUTTING STATION™

The Echo Barrier CS Cutting Station™ is a portable acoustic enclosure that can be erected rapidly and easily to contain noise from cutting activities. Its innovative design offers superior noise reduction and absorption in all directions without compromising the process for cutting items of any length (eg panels, timbers, tiles, tubes or beams). It is ideal for use indoors or next to high-rise structures. The viewing window facilitates communication and safe working. The enclosure is supplied with all the necessary components to prevent noise from bouncing off ceilings and walls, and to contain dust, debris and fumes, while providing a safe working environment.



Reduces noise pollution from on-site power systems

GENSET ENCLOSURE

Echo Barrier's Genset acoustic enclosure offers a simple, cost-effective way of mitigating noise produced by on-site power systems, reducing disturbance to neighbors at ground level and in overlooking buildings. Supplementing standard fencing around a generator, the GENSET enhances the performance of multi-purpose Echo Barrier products.



Accessories

Enabling rapid deployment

Hooks

These robust hooks ensure secure attachment of Echo Barrier panels to most temporary fencing systems.



Fitting kit

The only purpose-designed kit on the market for fitting acoustic panels. Available for fencing or scaffolding.



Vertical fitting kit

With this kit, Echo Barrier panels can be securely linked to create an acoustic curtain or wall in response to the particular conditions and challenges of a project.



Anti-theft cable

This vinyl-covered, multi-strand cable is threaded through the grommets of the Echo Barrier panels to secure them to fencing with the aid of padlocks.



Elastic ties

These specially-designed elastic ties rapidly secure Echo Barrier's acoustic panels in position, helping to ensure that acoustic leakage is minimized.



Contact your local Echo Barrier sales representative for information on product availability in your region, or visit our website

www.echobarrier.com



Support

Echo Barrier offers expert and comprehensive technical support to its customers. Our technical team is always available to advise on how best to deploy our acoustic panels in the context of a particular site, project or eventuality.

Group Head Office
Echo Barrier Limited
Conserv House
118a Newmarket Road
Bury St Edmunds
Suffolk
IP33 3TF
United Kingdom

Tel: + 44 (0) 845 561 3256
Fax: + 44 (0) 207 900 3489

Echo Barrier USA head office
Echo Barrier USA
150 N Michigan Ave.
(Suite 2800)
Chicago
IL 60601
USA

Tel: + 1 (800) 728 9098

Echo Barrier Mainland Europe
Echo Barrier s.r.o
Narodna trieda 39
04001 Kosice 1
Slovensko
Slovakia

Tel: + 421 904 228616
Fax: + 421 55 230 1322

Echo Barrier Australia/NZ
Echo Barrier Australia Pty Ltd
Level 32
101 Miller Street
North Sydney
NSW 2060
Australia

Tel: + 61 2 8006 1131

Echo Barrier East Asia
Echo Barrier Singapore and
East Asia
21st Floor
Phoenix Building
23 Luard Road
Wan Chai
Hong Kong SAR

Tel: + 85 281 257 510