INSTALLATION AND OPERATION MANUAL

NRG MARINE LTD.
1 & 2 Mercia Village, Torwood Close, Westwood Business Park, Coventry, CV4 8HX, Great Britain
Tel. : +44 (0)2476 105 150
Fax : +44 (0)8458 002 197
Email : info@sonihull.com
Web : www.sonihull.com

SONIHULL
ULTRASONIC ANTI-FOULING SYSTEM

V3.02552020R7

Welcome to Sonihull

Thank you for choosing the Sonihull ultrasonic anti-fouling system to protect your vessel from bio-fouling like algae, weeds and molluscs.

In this manual we will guide you through the best practices for fitting your Sonihull system. Please read the printed fitting instructions before you start your installation.

For further guidance, you can download the Sonihull app on your tablet or smartphone (Android and iOS devices supported).

In the Sonihull app you will find fitting guides for all the items you can protect from marine bio-fouling. Everything from hulls, box coolers and seachests to propellers, waterjets and pipework.

Alternatively, you can contact your local Sonihull supplier, or contact us direct at info@sonihull.com.

Sonihull – the Smart anti-fouling choice

Sonihull is suitable for use on all materials that transmit ultrasound well, including: steel, aluminium, stainless-steel, titanium, FRP & GRP composites, and rigid plastic constructions.

IMPORTANT – If your vessel is made from FRP or GRP Sandwich Construction (two rigid composite surfaces separated by a foam core) fitting the transducers will involve cutting through the inner skin and removing some core material in order to get access to the dry side of the outer skin. **IF IN DOUBT, CONTACT A PROFESSIONAL MARINE TECHNICIAN**.

SAFETY INSTRUCTIONS

DANGER –Carefully read and follow all safety precaution and warnings before attempting to install and use this control box .We recommend that the electrical installation of this system is carried out by a qualified Marine Electrician. When mounting the control box, please find a suitable dry location. Connect all AC connections in accordance with all the relevant Wiring Regulation. If the product is damaged or missing parts, please do not install to run.Always disconnect the system from the power supply before performing any maintenance or inspections. Periodically inspect the transducer, cables, and control box for wear or damage. Replace components as necessary. Do not attempt to open or modify the control box or transducer. Replace damaged power cords immediately with parts approved by the manufacturer or a qualified technician inorder to avoid a hazard .Unauthorized alterations or maintance may compromise safety and void the warranty. In case of a system malfunction, immediately disconnect the power supply and contact Sonihull's technical support team for assistance. Ensure children are supervised and do not tamper with or play with the system. It is an industrial grade, also it is intended to be used by laymen in shops, in light industry, and on farms.

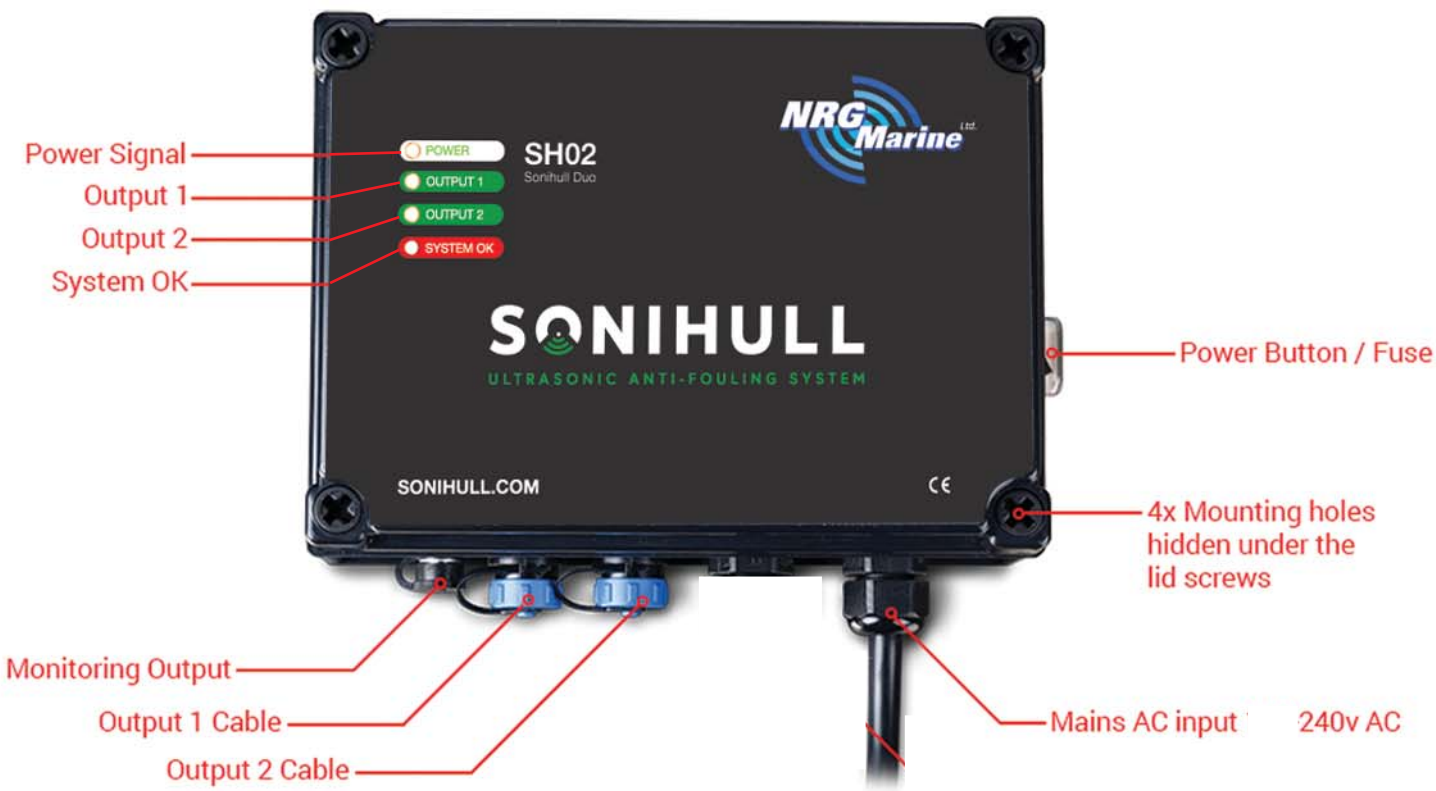
This system is not to be operated by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless under proper supervision or instruction.

Mains power cable colour codes:

Brown = Live Blue = Neutral Green & Yellow = Earth

IF IN DOUBT, CONTACT SONIHULL TECHNICIAN

SONIHULL AT A GLANCE



LED	COLOUR	NORMAL STATUS	FAULT STATUS	COMMENTS
Power on	Red	ON	Flashing	Flashing is normally due to incorrectly seated transducers.
Output 1	Green	ON	OFF	OFF when not connected or in fault.
Output 2	Green	ON	OFF	OFF when not connected or in fault.
System OK	Green	ON	OFF	Fault indication, check power & transdcuers.
Status output 3 core connector providing +5VDC output per channel in normal condition, and 0V in fault condition.				

Transducer

Cable

Transducer Ring

Monitoring Plug

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ULTRASONIC ANTI-FOULING SYSTEM

COMPONENTS INCLUDED

Sonihull Duo

- Sonihull ultrasonic pulse generator control unit with two transducer outputs
- Ultrasonic transducer complete with 7.5 metres of cable x 2
- Mains cable with 3 pin UK standard fused plug
- Marine Grade epoxy glue
- Transducer gel

Items required but not supplied with the Sonihull kit:

- 4x screws for mounting control box

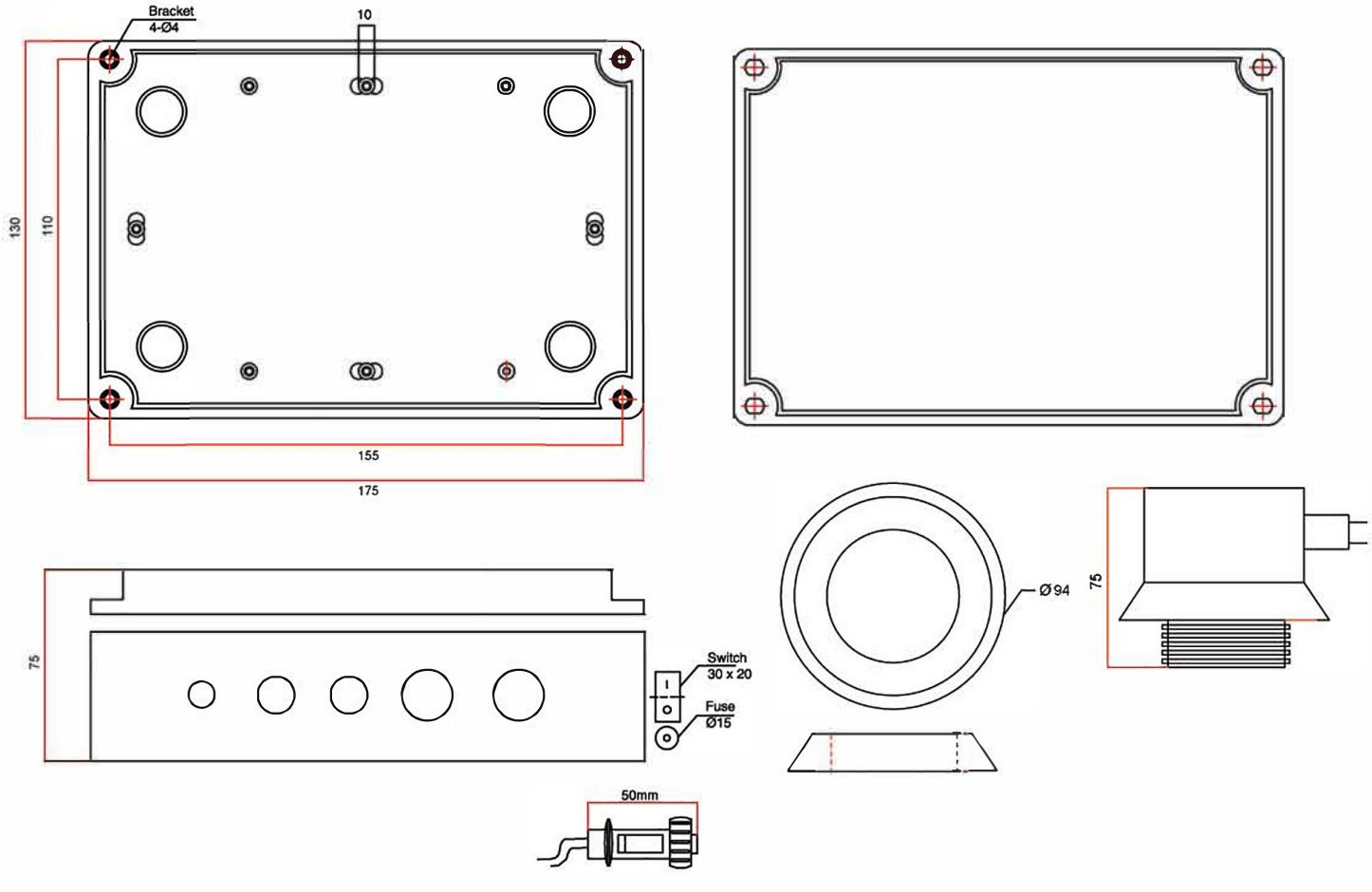
TECHNICAL SPECIFICATION

MONO & DUO

Power Supply Approvals	CE
Voltage	240V AC 50/60Hz
Power Consumption	
Sonihull Mono	3.6 Watts
Sonihull Duo	7.2 Watts

ULTRASONIC GENERATOR

Pulse Frequency	19.5 kHz - 55 kHz
IP Ratings	
Control Box Rating	IP65
Transducer Rating	IP68
Transducer Cable Length	7.5 metres
Weight:	4 Kg
Dimensions	175mm x 130mm x 75mm
Warranty:	2 years



SONIHULL

ULTRASONIC ANTI-FOULING SYSTEM

SONIHULL CONTROL UNIT

LOCATION & INSTALLATION

The Sonihull system requires little maintenance once installed, thus the control panel can be fitted out-of-sight, in a cabinet, cupboard or even in the engine room itself.

Find a suitable dry location above the water line, with suitable access to mains power.

Please also consider that the location should be suitable for cable access to the transducers. Mains AC supply 240 Volts AC, 50/60 Hz. (Ensure correct polarity. Ensure cables are supplied via a 5 amp in-line fuse.)

To mount the control unit, remove the lid to expose the four mounting holes and screw into place.

Replace the lid and plug the control unit into a suitable AC socket. If a socket is not available, please consult a competent marine electrician to carry out the electrical installation.

Once installed, the system should be periodically checked to ensure that it is powered and working correctly.

SONIHULL TRANSDUCER LOCATION

Once you have found a suitable location for the mounting of the transducer, ensure that there will be enough clearance above the transducer to replace any floor or access panels and that there is suitable access for running the cables back to the Sonihull control unit.

Prepare the hull/surface for the transducer by sanding down the area to ensure a smooth, flat, clean surface. It is important that both the hull and the transducer surfaces are flat and clean to ensure the best possible surface-to-surface contact and ultrasonic signal transmission. Clean the transducer face and contact surface to ensure there is no dust or grease.

Transducers are to be mounted directly to the dry side of the surface being protected. If the vessel is of a sandwich construction (two rigid surfaces with a foam core) please consult a professional marine technician, as fitting a transducer to the outer skin will involve cutting through the inner skin and removing some of the sandwich core filling to bond with the dry side of the outer skin.

Please also read our SONIHULL INSTALLATION TIPS on the following pages, for more advice about transducer location and installation.

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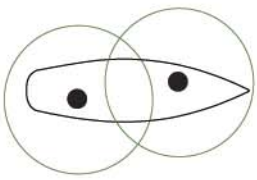
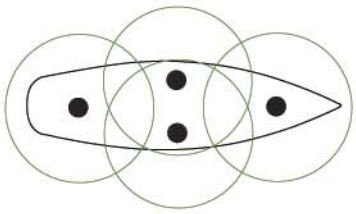
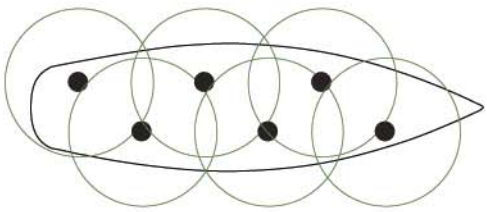
TRANSDUCER POSITIONING – BY VESSEL TYPE

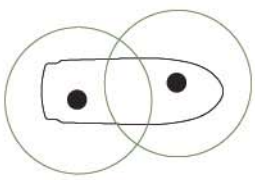
SAILING YACHT

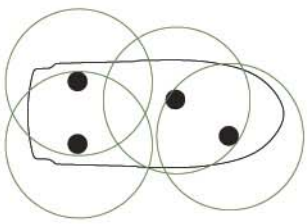


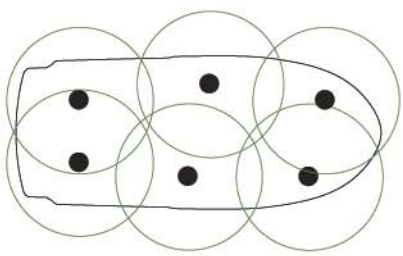




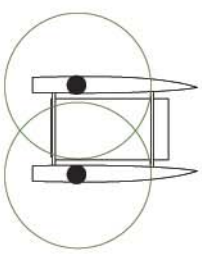
POWER BOAT

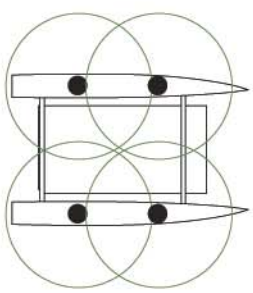


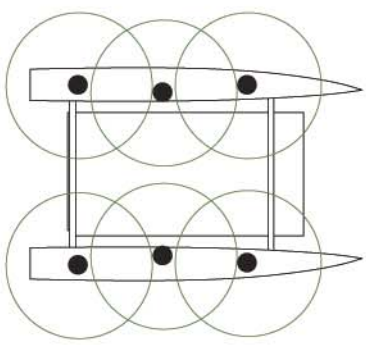




CATAMARAN





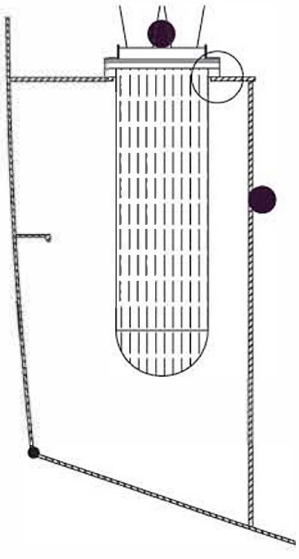


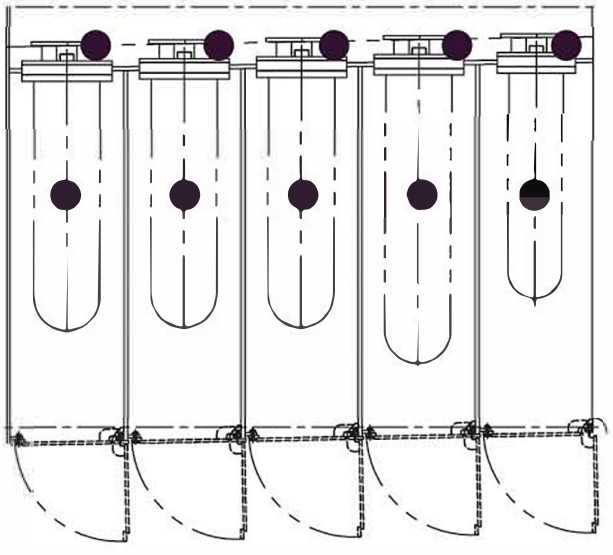
Up to 50ft. (15 metres)
1x Sonihull Duo

50-70ft. (15-21 metres)
2x Sonihull Duo

60-100ft. (18 to 30 metres)
3x Sonihull Duo

TRANSDUCER POSITIONING – FOR BOX COOLERS

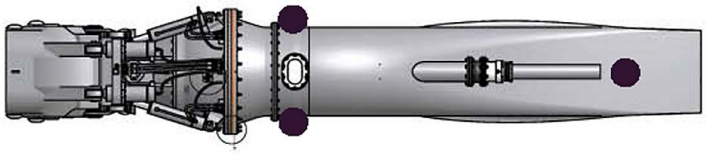




TRANSDUCER POSITIONING – FOR JETDRIVES

Recommended Sonihull transducer locations:

1x Transducer located in the centre of the impeller housing
1x Transducer located on the intake housing in line with the impeller shaft



*Contact us for specific installation advice if:

- Your vessel is larger than 55 feet
- Your BWL (Beam at the Waterline) is greater than 16 feet
- For larger commercial vessels or inboard equipment (sea chests, box coolers, tanks, pipework, prop-shafts etc...)

JOB ORDER FOR TYPICAL INSTALLATION

1. Prepare the surfaces where the Sonihull transducers will be located and epoxy down the transducer mounting ring(s) – allow enough time to let the epoxy set. (read pages 7-10)
2. Mount the control box, connect the power (read page 5)
3. Apply transducer gel and attach transducer(s) (read pages 10-11)
4. Run cable back to control box not forgetting to leave enough cable slack by the transducer so it can be unscrewed for future maintenance.
5. Plug in transducers and switch on.

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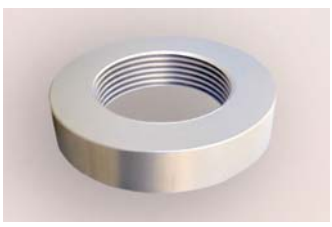
SONIHULL ACCESSORIES

Ensure you have all the surface-mounting adaptors you need to protect all your equipment against marine biofouling



ALUMINIUM MOUNTING RING
Marine grade weldable aluminium is ideal for a wide range of aluminium vessels, jet drives, sea chests and other aluminium marine structures. Ideal for new builds where the rings can be fitted as part of the standard build where Sonihull is offered as a buyer option.

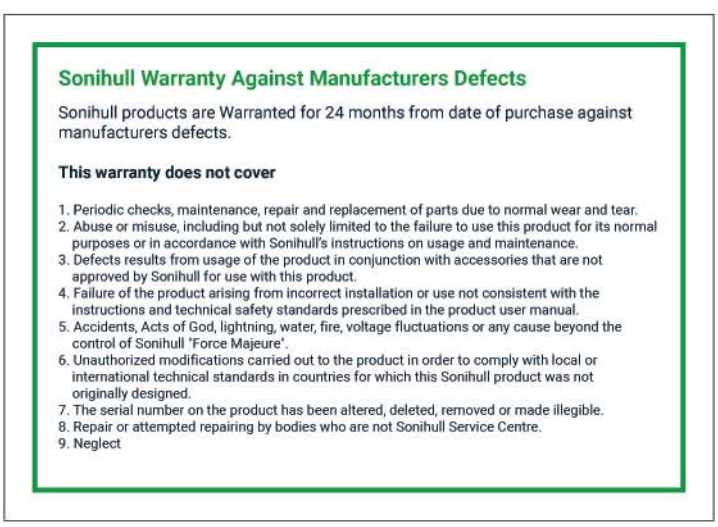
STERN DRIVE ADAPTOR

This bolt-on device allows ultrasonic transmission into surfaces that are hard to reach, like stern drive. Results show an impressive average of 80% reduction in fouling on stern drives using Sonihull via a stern drive adaptor.

SONISHAFT

This universal vibration-absorbing mount enables Sonihull's ultrasonic antifouling pulses to be transmitted directly into a rotating prop shaft and along through to the propeller. A clean prop can reduce fuel consumption by 20%.

PIPE ADAPTOR
With a wide range of standard -diameter pipe adaptors, Sonihull can be attached to almost any kind of pipework. Protecting valves, inlets, sea chests, box coolers, keel coolers and heat exchangers form being clogged by marine growth.



Sonihull Warranty Against Manufacturers Defects

Sonihull products are Warranted for 24 months from date of purchase against manufacturers defects.

This warranty does not cover

1. Periodic checks, maintenance, repair and replacement of parts due to normal wear and tear.
2. Abuse or misuse, including but not solely limited to the failure to use this product for its normal purposes or in accordance with Sonihull's instructions on usage and maintenance.
3. Defects results from usage of the product in conjunction with accessories that are not approved by Sonihull for use with this product.
4. Failure of the product arising from incorrect installation or use not consistent with the instructions and technical safety standards prescribed in the product user manual.
5. Accidents, Acts of God, lightning, water, fire, voltage fluctuations or any cause beyond the control of Sonihull 'Force Majeure'.
6. Unauthorized modifications carried out to the product in order to comply with local or international technical standards in countries for which this Sonihull product was not originally designed.
7. The serial number on the product has been altered, deleted, removed or made illegible.
8. Repair or attempted repairing by bodies who are not Sonihull Service Centre.
9. Neglect

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