Seabird goes Ultrasonic

Mike Hotard

From the title many of you will have understood immediately what I am referring to. Others will be thinking what the heck am I talking about. Well I am talking about ultrasonic antifouling of course. Some say it's great, others say it's a waste of money. The system uses ultrasonic pulses through the hull to stop marine life making a home on your boats underside. It doesn't rely on poisonous or toxic chemicals to kill marine life. Of course marine paint manufactures have been reducing the amount of toxic chemicals in antifouling for some time now anyway. Some say because of this the antifouling paints are getting less effective. Bob Tuffnell pointed out on my Macwester Facebook post that in parts of France it has been illegal to scrub off and antifoul on a tidal hard for over 20 years now. You have to be hauled out and go to a designated site where the paint scrapings and sanding's can be collected and disposed of. Let's be honest antifouling paint is pretty nasty stuff.

Unlike toxic paint an ultrasonic antifouling system works by sending varying frequencies through the hull that create microbubbles that implode. This stops algae growing. Algae is bottom of the food chain. So the absence of algae reduces other marine growths. Perhaps for the algae the experience is like us trying to set up home while earthquakes and tremors are taking place? So ultrasonics are less harmful to the environment.

So Mike I hear you say, are you becoming green and environmental? Well no, this is more about me to be honest. The desire to dodge the annual task of scraping and scrubbing 36 foot of boat before painting it with antifoul. It's about me not feeling like I have been beaten up when I wake up in the morning. Muscles aching after spending the previous day on the hard under my boat removing marine life growth and applying a fresh coat of antifoul paint.

So here is how I went about fitting an ultrasonic device to Seabird for anyone else that wants to go down this DIY path themselves.

To begin with I spent some time online looking at the systems available. There are various suppliers. NRG Marine, Jaycar, Sonihull, Smart System and Citadel to name a few. How to you pick which one to go with given such choice? A few of course are mentioned in blogs, forums and some have been independently tested with various results. I chose the Citadel product. This is how I evaluated the field and made my unscientific decision. You may take a different approach.

The first thing I noticed is some kits had a ring you bonded to the hull. Then the transducer was screwed into the ring. Other transducers you bonded straight to the hull. The ring would be great if you wanted to replace the transducer in future I guess. However in my mind bonding straight to the hull seemed to make more sense. All of the transducer surface would be in contact with the hull. The next thing I looked at was the size of the transducers. They say size matters and good things come in small packages. However for me big is beautiful. Maybe it would be a stronger signal, perhaps it would last longer? Who knows? So for purely subjective reasons I went for big transducers you could bond to the hull to narrow the product choice. Then there was something in Citadel's product information claiming the product was made to UK and US military standards. Well that could be good or bad. All I know is whenever I have bought anything from the Army surplus store the stuff seems pretty well made and long lasting.

The Citadel system had one of the lowest power consumptions. That was another thing in its favour. The control box would also shut it down if it sensed the battery was getting low. Another good feature. Finally there was the option of purchasing an adaptor in future if I wanted to run off 240 volt shore power. Handy to have if in a marina. So Citadel came out top for me.

So having decided I bought the Citadel product. Here's what came in the kit: Control box, two transducers (two recommended for my length of boat), two transducer to control box cables one 5 metres and one 10 metres and full instructions.

I purchased separately a length of tinned two strand wire, a fused 5 amp link, a toggle switch, stainless screws for mounting the control box and a tin of the required Isopon P38 for bonding transducers. Tools required: screwdriver (Big and small), plyers, electric drill and drill bits, masking tape, marker pen, electric sander. I already had some sealant for the holes drilled in bulkheads to run cables. (The cable connector diameter was bigger than the wire requiring drilling bigger holes through the bulkhead.)

The instructions give guidance on siting the transducers depending on type of boat and length. For me it was one forward and one aft 30 cms from centre line. So first task is finding suitable locations for transducers, site for the control box and the cable runs. On Seabird the forward transducer site was under the floor in the starboard hanging locker and the rear one in the aft cabin under the port side bottom cabinet draw.

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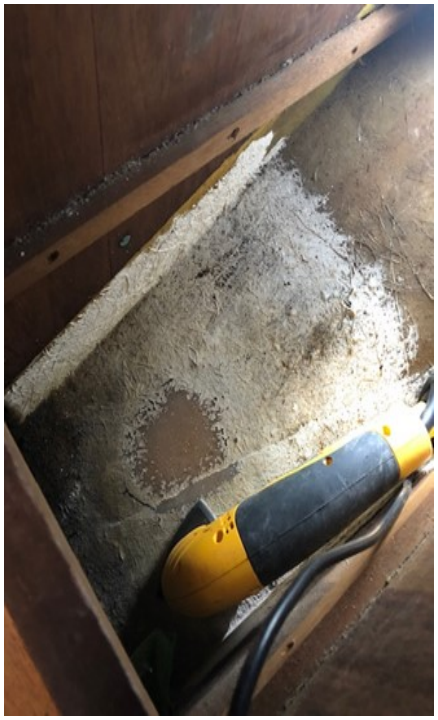
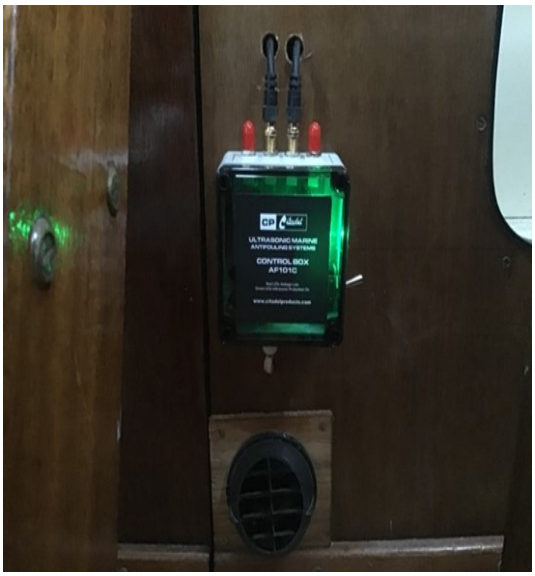


The control box would go on the bulkhead by the stairs from the wheel house into the main cabin. That gave me the easiest run for power cable and transducer cables.

So the plan was to sand down the hull surface where the transducers were to go. Mix up the Isopon and bond them. While they set fit the control box and cables and wire up the power. The kit is connected to its own live feed with the 5 amp inline fuse. I did a little modification on this. The control box had enough space on the inside to drill a hole in the side of the plastic box and fit a suitably rated toggle switch and the 5 amp fuse. That way it would be easy to find and change a fuse and I could also switch off the system when on board or underway.



I spent an afternoon fitting the system. It was a fiddle running the cables but compared to the effort of scrubbing off the bottom of Seabird no contest. I would rather fit an ultrasonic systems than spend my time under a boat cleaning it any day. So will the ultrasonic kit work? I don't know but has to be worth a try. I can tell you this time next year in the journal how it performs and if it was money and energy well spent or not.