

SPA AUDIO PRIMER

"The Sweet Sound of Sales"

by Charles A. Miltenberger

Hmmm... an audiophile listening to Mozart while a soothing flow of spa jets gently massage his or her aching muscles? I don't think so. Maybe with a pair of water-proof noise cancellation headphones. Any noise created by the low rumble of the jet motors quickly nullifies the high fidelity experience. Does that mean that enjoyable, quality music cannot be enjoyed while relaxing in a spa? Certainly not.

Spa manufactures have been quick to learn the significant marketing value of a good sound system included with their spas. Whether it be for personal pleasure, an outdoor patio party or any other social event, ambient background music has always had its value.

Of course, your spa sound system needs to sound top notch when the the spa jet are not on. Having properly designed marine grade drivers, power protection/crossovers, and a quality head unit (radio) are all key to this system design.

To pop up or not to pop up - that is the question. Some existing and earlier speaker systems in spas were inserted into the mold of the spa with "mounds" that would stick up in the four corners of the spa. This sounded good, but shipping the heavy spa across country took its toll on many units and these protrusions were easily damaged. Putting the speakers just above the water line fixes this problem. However, if a lot of splashing is going on in the spa, sound will be temporarily muffled while the speakers are submerged.

In recent years, "pop-ups" have been created to be unobtrusive and yet provide out the way performance audio. The drawback to these systems is that they are susceptible to mechanical defects and spa horseplay can damage them for good.

All systems will be hindered by the noise of the jet motors. There is just no way around it. The jet motor sound can and should be minimized, but even the air bubble noise will detract to the overall music experience. Ever listen to a group of spa goers from a distance? It is usually very easy to hear their conversation because they need to talk above the sound level of the spa noise. They themselves may not even notice it - the human ear and brain adjust naturally and subconsciously.



So, you need enough power to get above this noise threshold. Although the amount of power is usually in direct correlation to the head unit's quality, a spa manufacture needs to be pragmatic in choosing a radio. Since the speakers are in close proximity to the listener's head, one does not need as much power as a conventional home speaker system or even a car system. In addition, increasing the power level so that the system is easily heard above the jet noise quickly gets the sound into the high decibel range. One has to use caution for liability reasons.

The optimum way to hook the system up with today's head unit's low-level subwoofer output is to use a powered subwoofer.



The front channels can then be used to power the internal spa speakers and the rear channels are free to be used to power any external speakers. Of course, a powered subwoofer is more expensive than a passive one. You can use the rear channel of your head unit to power a passive subwoofer if you go this route. Since all of your main speakers will be used on the front two channels, you need to make sure your main speaker cluster's impedance combine for 4 ohms per channel (can be higher, but not lower - this can cause your head unit to trip or turn off, or even render it defunct by frying a transistor on cheaper models with little or no power protection circuitry.



Proper power protection and cross-over points between the speaker and the sub is critical for good sound and a zero return rate. We will elaborate on this topic and others in future publications.

Vidsonix carries a complete line of marine grade speakers for the chemically harsh spa environment and has years of audio expertise to assist you in your new system design.

We will custom tool parts based on



your requirements and provide you with the best product performance, quality and service.

Vidsonix works hard to bring you unmatched low pricing.

We will happily send you evaluation samples for review - we are always one step ahead of our competition. New designs are always in process and our products are backed by all applicable copyright and patent protection laws.

We look forward to establishing a long-term relationship with other companies interested in the same.



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