

# Rythmik Audio | Articulate bass for the discerning audiophile

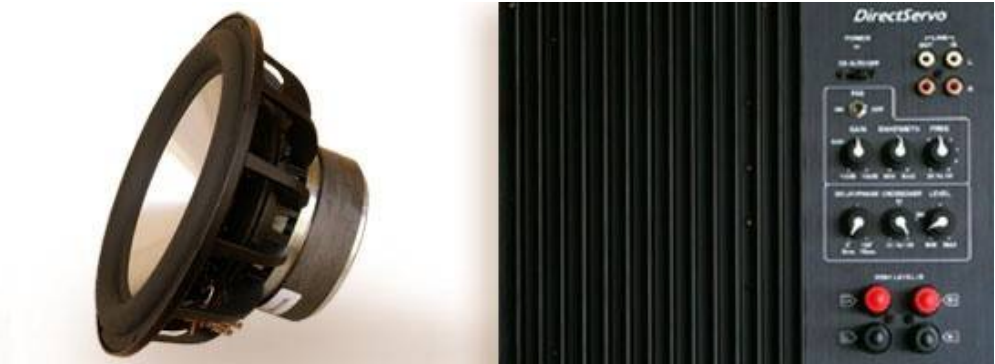
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## DS1200 CI - Direct Servo subwoofer

12" sealed sub for custom installations

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### Introducing our new custom range of subwoofers

There are many benefits to a custom subwoofer product. For those concerned with spouse acceptance factor, often a subwoofer is best felt and heard but not seen. For others, a subwoofer should match the interior of your home. Either way, our CI series products are the ideal choice. Have it built by a local trusted furniture maker, or if you are handy, you may choose to build it yourself.

Our DS1200 subwoofers feature the same components as our [F12 subwoofers](#). This subwoofer features our high end [DS1200 sub driver](#) which is available in silver or black anodized aluminum. Also featured is a subwoofer plate amplifier of your choice from our range.

### Which subwoofer is right for you?

This subwoofer is best used with a crossover below 90 Hz. If you require a higher crossover point, we recommend you consider our [GR ci subwoofers](#).

To determine which product is best for you, please view our [product selection guide](#).

### Your choice of enclosure

Direct Servo technology can be applied to any enclosure type - it is not limited to sealed boxes. If you would like to use an enclosure other than sealed or vented, we can design a custom servo board to ensure you receive all the benefits the technology allows. [Contact us](#) if you would like to create something different.

### Subwoofers for audiophiles

For audiophiles looking for uncompromising accuracy, our subwoofers are the ultimate choice. They feature our Direct Servo technology to ensure accuracy and definition. We don't merely design low distortion subwoofers. We are concerned with eliminating the problems which most degrade the accuracy of a subwoofer. Problems like [memory effects](#) which are clearly audible are dramatically reduced. Perhaps you already own a subwoofer but have been disappointed to discover that it added more than extra depth. Or perhaps you have avoided purchasing a subwoofer because you were unwilling to compromise the accuracy of your system. Rest assured that you have found a subwoofer for audiophiles.

### Better technology

Nearly all subwoofers on the market are based on outdated [technology](#). Our subwoofers are based on our patented Direct Servo technology. Not only does [our technology](#) surpass that of conventional subwoofers, it also offers significant improvement to the performance of other servo systems. In our [technology section](#), we describe the differences between Direct Servo and other servo technologies. Our system is better suited to music reproduction than other servo systems.

## Amplifier and driver options

DS1200ci features your choice of three amplifier options. A370PEQ and A30PEQ3 feature parametric EQ and our A370XLR2 and A370XLR3 have additional balanced inputs (sans speaker level inputs). [More information on our amplifiers >](#)

The DS1200 driver is available in a silver or black anodized aluminum version. [More information on drivers >](#)

## Ordering details

For a vented box, we recommend [DS1510ci](#).

### [Single driver CI with A370 amplifier](#)

DS1200 comes with foam gasket installed already. This gasket is concealed under the driver outside mounting rim and enables an air tight seal to be achieved. An additional rubber gasket is available which fits around the rim. We do not provide this additional rubber gasket unless requested, because we don't recommend that you use it unless it is used for cosmetic reasons. We also have 3 amplifier options: A370PEQ3, A370XLR2, and A370XLR3. A370XLR2 has one XLR input and one XLR output. The XLR output can be either used as master slave signal transmission, or for HPF output of the XLR inputs. A370XLR3 has two XLR inputs. Both XLR models have one band defeatable PEQ, 12V trigger input, and separate limiter ON/OFF switch. We are currently out of A370PEQ3 amps. A370PEQ, A370XLR2, and A370XLR3 are available.

Description: Default amp is A370PEQ3 (with both LFE and line in, no HPF)	Price	
DS1200 black cone sealed 2 cu ft with A370PEQ3 servo amp	\$639	<a href="#">Buy it now</a>
DS1200 black cone sealed 2 cu ft with A370PEQ servo amp	\$639	<a href="#">Buy it now</a>
DS1200 black cone sealed 2 cu ft with A370XLR2 servo amp	\$669	<a href="#">Buy it now</a>
DS1200 black cone sealed 2 cu ft with A370XLR3 servo amp	\$669	<a href="#">Buy it now</a>
Description: All other amplifier options	Price	
Change to silver cone driver for one subwoofer	\$50	<a href="#">Buy it now</a>

## HX300/HX580 Hypex Ucd based amplifiers

We now offer HX300/HX580 Hypex-module-based amplifiers for DS1200 drivers. Their power rating is 300WRMS and 600WRMS, respectively. HX300-12S is designed to drive one DS1200 driver while HX580-12S (with two Ucd modules) can drive two DS1200 drivers. Please note these HX300/HX580 has only one RCA input and one mini-XLR input. Please consider that when making purchase. Customers can also increase enclosure size up to 2.4 cu ft to fully utilize the excursion capability of DS1200 as the power per driver with these amps is slightly smaller than that of A370 series amplifiers.

### [Single driver CI with HX300 amplifier up to 2.4cu ft](#)

Description: Compact HX300-12S amp (with one RCA and one mini-XLR input)	Price	
DS1200 black cone sealed up to 2.4 cu ft with HX300-12S servo amp	\$459	<a href="#">Buy it now</a>

### [Dual driver CI with HX580 amplifier up to 4.8cu ft for two drivers](#)

Description: Two drivers with HX580-12S (with one RCA and one mini-XLR input)	Price	
Dual driver kit with two DS1200 drivers and one HX580-12S amplifier up to 4.8 cu ft	\$779	<a href="#">Buy it now</a>

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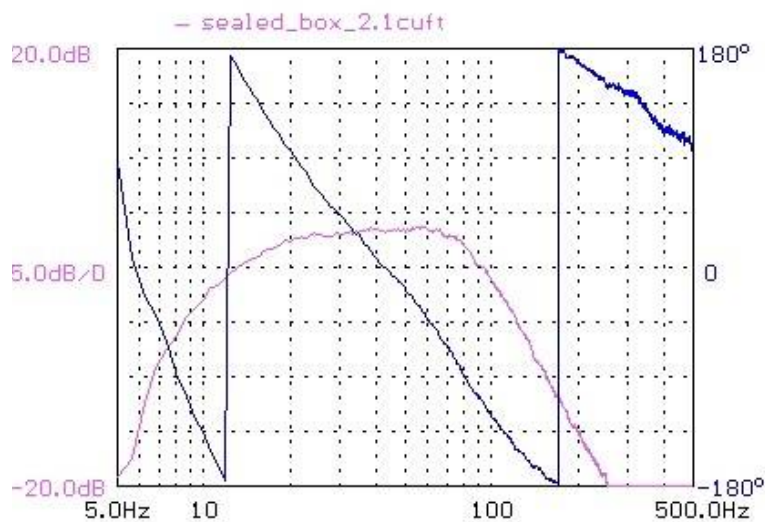
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### Performance

Unlike conventional subwoofers, the frequency response remains flat at all output levels until the output limits have been reached. Without Direct Servo, a flat response will only be achieved at low output levels.



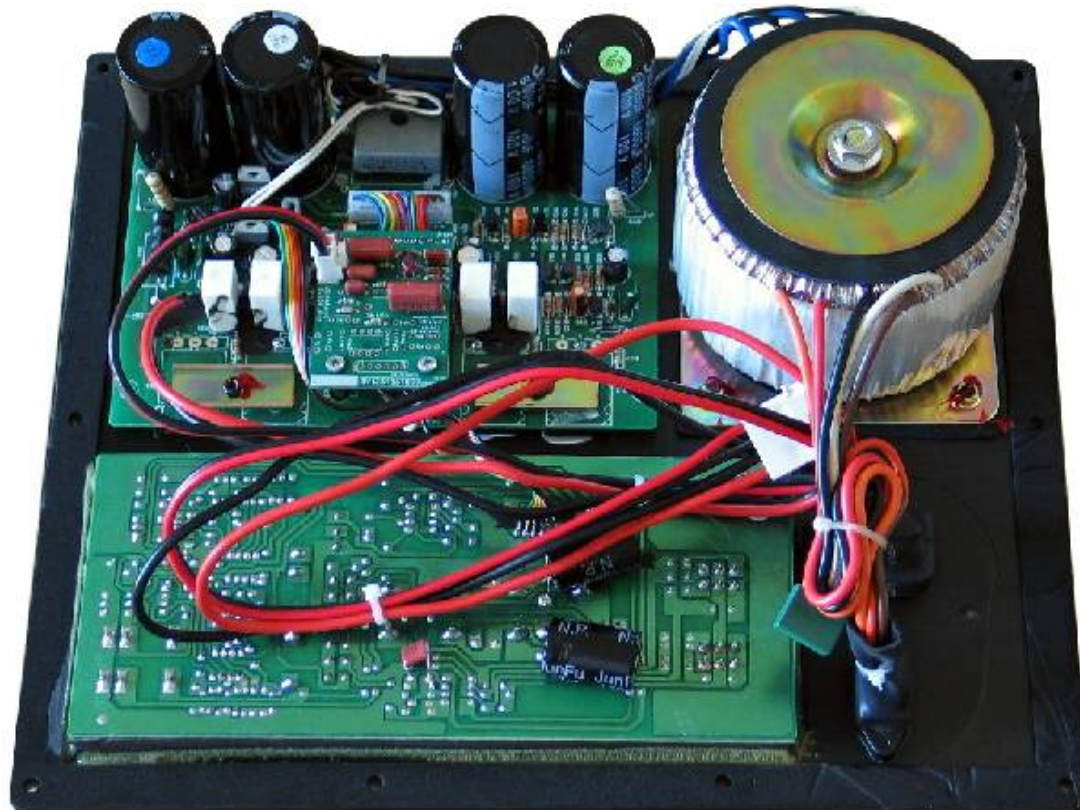
**Recommended:** sealed alignment

A sealed box is recommended for DS1200ci. Those who would like the extra low frequency output of a vented box should choose our [15" DS1500ci](#). The driver has a higher excursion headroom and the risk of bottoming the driver is less. In a vented box, the extra output comes from the higher efficiency caused by the vent output. To achieve this higher efficiency, a larger box is required. Many believe that a 12" vented box will be "faster" than a 15" but this is not the case with our products.

[Contact us](#) if you would like to consider an alternative alignment to sealed or vented box.

### Component selection

We carefully select all components for performance and value. We have selected components that will return the best value. For instance, the MILLS current sensing resistors, the op amps, and the hand selected MOSFET inputs stage for power amplifiers. We don't cut corners. We also avoid wasting money on "audiophile" components which offer no real advantages.



### Flexible design

All of our subwoofers feature unique bass extension controls which are not normally provided on subwoofers. This enables the user to customize the output and extension to achieve the best compromise in any room. Most subwoofers neglect to provide bass extension control, and the result is that dynamic headroom is compromised. [➤ More info](#)

### Sub crossover filter

(12 dB or 24 dB low pass roll-off)

A lot of audiophiles like to run their front speakers full-range. The objective is to avoid any signal degradation on the front speakers. Our recommendation is to have a simple RC network as shown in the FAQ page to relieve the bass burden from the front speakers. In either case, a 24 dB low pass roll-off version of the subwoofer is recommended. Phase alignment is also very important. One can either use the phase control on the plate amps, or the delay time adjustment on HT receiver to dial in the phase alignment. The phase control on the plate amp is only for phase lag adjustment on the subwoofer. The delay time adjustment on the HT receiver can achieve both phase lead and phase lag adjustment on the subwoofer. As a general rule of thumb\*, the sound wavelength of 50 Hz is 20ft. A full wave is 360 degrees. Therefore, if we put the physical distance in the delay time adjustment menu 5 ft further (or closer) than the physical distance is, the HT receiver will put a 90 degrees phase lead (lag).

\*Actual value varies with ambient air temperature

### Customized Bass extension

All of our subwoofers feature unique bass extension controls, shown below.

The bass extension controls enable the user to customize the frequency response of the low end. The controls customize a high pass filter, which attenuates frequencies below a given frequency. If set to 14 Hz, bass below this point will be filtered. The damping control determines the slope of roll-off and the amount of time domain ringing. High damping provides the least amount of time domain ringing and the most gradual roll-off curve. Low damping provides the steepest roll-off at the low end at the expense of added





time domain ringing. The combination of 28hz and low damping is recommended for maximum SPL output for all of our sealed subwoofers.

### Why is this necessary?

Very low bass can cause very large cone excursions without contributing useful output. The result is that the output is limited by the large excursions required at very low frequencies. The bass extension filter increases output by reducing unwanted signal. For maximum output, the 28 Hz setting should be used with high damping.

### Recommended settings

For sealed subwoofers, the default configuration is the 14 Hz setting with low damping. For home theatre use, a higher setting for both switches may be used. For vented subwoofers, the default configuration is the 20 Hz setting with high damping. In individual situations, other settings may prove more suitable. Experimentation is recommended to determine best fit. Caution is recommended with the choice of settings for vented configurations. If the damping setting is set to a frequency below the tuning point of the subwoofer, cone excursion will not be effectively controlled. Low damping will also not provide sufficient excursion control.

For more information on the EQ used in our subwoofers, [view our EQ page](#).

### Voltage selection

Before use, correct voltage must be selected. Voltage switch is shown below.

