

[> Home](#)

[> Products](#)

[> Technology](#)

[> Plans & DIY](#)

[> Ordering](#)

[> Reviews](#)

[> About us](#)

[> FAQ](#)

[> Contact](#)

F18 Direct Servo subwoofer

18" sealed audiophile sub with 900WRMS amplifier

[Overview](#) | [Options & Features](#) | [Performance & Specs](#)



Finesse meets brute force

Our servo technology is scalable to all subwoofer designs as well as driver size. F18 is our largest single driver sealed subwoofer to meet the needs for a high power home theater solution that retains the dynamic, accurate, and deep bass that we have become known for. Its max output at 20hz is at least 8db higher than that of our 12" sealed model F12 and more than 11db higher than our competitor's 12" model SB** measured by [data-bass.com](#). The amplifier is based on Hypex audiophile class-D module. With the combination of the servo feedback and stiff aluminum cone, we have achieved lower distortion than competitor's 18" servo subwoofers (DD18+) with the same or even higher maximum SPL output from 10hz to 100hz, as tested at [data-bass.com](#). In fact, F18 has recorded the lowest THD numbers at the maximum SPL output than any other subs tested. Our servo technology is scalable to all subwoofer designs as well as driver sizes.

Direct Servo Technology

All our subwoofers use our patented Direct Servo technology. The servo enables precise control over the cone which is essential for tight, dynamic and accurate bass. It also counteracts many different driver non-linearities and allows us to use lighter drivers which avoid the need for excessive amounts of amplifier power.

Some of the benefits of **Direct Servo** include:

- Dramatic boxy sound reduction of the [re-radiation of bass](#) from inside the box
- [Thermal compression](#) are eliminated under normal operation
- [Higher efficiency](#) allowing output which would normally require a more powerful amplifier
- Deep bass extension can be achieved using a low mass driver with superior transient response
- Mechanical creep| [memory effects](#) are reduced, further improving transient response
- The effective Q value is 0.1 resulting in much tighter and accurate bass than conventional designs

Read more about Direct Servo in our [technology section](#).

[View animation demonstrating how Direct Servo works >](#)

HX1000XLR3 Amplifier and DS1820 Driver

F18 comes with a grille. The above photo is shown with grill taken off. It uses our new high power HX1000XLR3 servo amplifier and metal cone DS1820 driver. DS1820 features anodized aluminum cone, a 3" voice coil, and 240 oz magnet. Its linear excursion range is +/- 20mm.

The standard amplifier is HX1000XLR3. The quickguide of the XLR3 amplifier for vented subs can be found [here](#) . The F18 installation guide can be found [here](#) . The response curves with various extension frequency/damping combinations of both amplifiers can be found in our [EQ page](#).

The sub comes with standard screw-in rubber feet. Chrome spike feet are sold separately. **The price includes UPS ground shipping to 48 US continental states only.**

Description: with 48 states shipping included	Price	
F18-SE piano black finish with HX1000XLR3 amplifier and black alu cone driver	\$1850	Buy it now
F18 black oak finish with HX1000XLR3 amplifier black alu cone driver and 48 states shipping	\$1630	Buy it now
F18 black matte finish with HX1000XLR3 amplifier black alu cone driver and 48 states shipping	\$1630	Buy it now
Change to silver cone driver for one F18 subwoofer	\$100	Buy it now

CEA2010 Max Passing SPL(dB) REFERENCED TO 2 METERS GROUNDPLANE RMS				
UNIT TESTED: RYTHMIK F18				
CENTER FREQ HERTZ	MAX PASS SPL (2 meter GP rms)	CEA2010 THD+N(%)	NOTES	MAX SPL (THD) NO THD LIMIT
10	90.7	19.8%	3RD HARMONIC LIMITED	92.2 (34%)
12.5	94.4	18.5%	3RD HARMONIC LIMITED	96.1 (39%)
16	99	19.7%	3RD HARMONIC LIMITED	100.2 (37%)
20	103.2	17.3%	3RD HARMONIC LIMITED	104.5 (33%)
25	107.9	15.4%		N/A
31.5	111.3	6.6%		N/A
40	114.1	4.9%		N/A
50	116.1	3.0%		N/A
63	117.5	3.8%		N/A
80	118.2	4.6%		N/A
100	118.4	4.2%		N/A
125	118.4	2.7%		N/A
THD LIMITED	CANNOT PASS CEA2010			
AMP LIMITED	MAX SPL (NO THD LIMIT)			

Copyright © Data-Bass / Josh Ricci 2017

CEA2010 Max Clean SPL (dB) with Passing THD+Noise

UNIT TESTED: VELODYNE DD18+ SERVO GAIN 8

CENTER FREQ HERTZ	MAX PASS SPL (2 meter GP rms)	CEA2010 THD+N(%)	NOTES	MAX SPL (THD) NO THD LIMIT
10	86.1	18.1%	3RD HARMONIC DISTORTION LIMITED	89.8 (87.5%)
12.5	92.5	19.07%	3RD HARMONIC DISTORTION LIMITED	94 (66.8%)
16	98.9	22.9%	3RD HARMONIC DISTORTION LIMITED	100.3 (27.7%)
20	103.6	26.78%	3RD HARMONIC DISTORTION LIMITED	104.5 (47.9%)
25	108.2	18.68%		N/A
31.5	112.9	13.41%		N/A
40	115.3	4.56%		N/A
50	116.3	7.20%		N/A
63	115.1	7.40%		N/A
80	113.4	9.17%		N/A
100	112	7.79%		N/A
125	110.6	2.78%		N/A
THD LIMITED	CANNOT PASS CEA2010			
AMP LIMITED	MAX SPL (NO THD LIMIT)			

Copyright © Josh Ricci 2011

Independent Lab Test Results of Low Distortion and Textbook-like Impulse response

The independent test lab site www.data-bass.com has published the max distortion numbers for F18 and Velodyne DD18+ (courtesy of Josh Ricci). The F18 has lower distortion and yet more output than Velodyne DD18+ for 1/3 of the price. In addition, the test results also include the impulse response of 18hz high damping which shows minimal ringing, a testament of F18 articulation bass sound.

SHOP
SECURELY



Buy now. Pay over time.
Check out with PayPal and choose PayPal Credit.
US customers only. Subject to credit approval. [See terms](#)

[Home](#) | [Products](#) | [Technology](#) | [DIY](#) | [Ordering](#) | [Reviews](#) | [FAQ](#) | [About us](#) | [Contact](#)

Copyright © 2006 - 2016 Rythmik Audio. All rights reserved. Site: [3 Corners Webworks](#)