

System				
System Type	12" 2-way, Bi-amp Powered Speaker, Bass-reflex Type	15" 2-way, Bi-amp Powered Speaker, Bass-reflex Type	Dual 15" 2-way, Bi-amp Powered Speaker, Bass-reflex Type	18" Powered Subwoofer Bass-reflex Type
Frequency Range (-10dB)	55Hz ~ 20kHz	45Hz ~ 20kHz	45Hz ~ 20kHz	40Hz ~ 130Hz
Frequency Response (-3dB)	60Hz ~ 18kHz	55Hz ~ 18kHz	55Hz ~ 18kHz	50Hz ~ 110Hz
Coverage Angle	H90° x V60°	H90° x V60°	H90° x V60°	-----
Crossover Type	FIR-X tuning™ (linear phase FIR filter)			
Crossover Frequency	1.7kHz	1.7kHz	1.7kHz	-----
Measured Maximum SPL (peak) IEC noise @ 1m	134dB SPL	136dB SPL	138dB SPL	132dB SPL
Amplifier				
Amplifier Type	Class-D			
Power Rating	1300W	1300W	1300W	800W
LF	850W	850W	850W	800W
HF	450W	450W	450W	-----
Cooling	Natural Convection			
Controls	LEVEL control, LINE/MIC switch, HPF switch, D-CONTOUR switch, FRONT LED DISABLE switch, POWER switch			LEVEL control, POLARITY switch, FRONT LED DISABLE switch, POWER switch
Indicators	PEAK: x1(Red), LIMIT:x1(Red), PROTECTION:x1(Red), POWER:x1(Green), FRONT:x1(White), HPF:x1(Orange), D-CONTOUR :x1(Orange)			PEAK: x1(Red), LIMIT:x1(Red), PROTECTION:x1(Red), POWER:x1(Green), FRONT:x1(White),
HPF Frequency	120Hz(-6dB) 24dB/oct	120Hz(-6dB) 24dB/oct	120Hz(-6dB) 24dB/oct	-----
Boost Type	D-CONTOUR (Dynamic CONTOUR)			
Protection	Load	POWER switch on/off: Mute		
		DC-fault: Power supply shuts down automatically (reset manually)		
		Integral Power Protection: Limit the output (return automatically)		
		Clip limiting		
Amplifier	Thermal: Limit the output or Mute (return automatically)			Thermal: Mute (return automatically)
	Output through current: Amplifier shuts down automatically (reset manually)			
Power supply	Thermal : Amplifier shuts down automatically (reset manually)			
	Over voltage: power supply shuts down automatically (reset manually)			
Connectors	Input	XLR-3-31 x1 (Balanced) TRS Phone Jack x1 (Balanced)		XLR-3-31 x2 (Balanced)
	Output	XLR-3-32 x1 (Balanced) Parallel connection with INPUT		XLR-3-32 x2 (Balanced) Parallel connection with INPUT
	Power	AC inlet x1		
Power Consumption	1/8 Power	100W	100W	140W
100W	100W	140W	100W	
Transducer				
Low-Frequency	Materials	12" cone	15" cone	2 x 15" cone
Magnet		Neodymium Magnet	Neodymium Magnet	Ferrite Magnet
Voice Coil	Diameter	3"	3"	2.5"
High-Frequency	Materials	2" Titanium diaphragm compression driver		-----
Magnet		Neodymium Magnet		-----
Enclosure				
Dimension(W x H x D)		370×638×368 mm (14-5/8" x 25-2/8" x 14-4/8")	442×755×423 mm (17-4/8" x 29-6/8" x 16-6/8")	467×1158×520 mm (18-3/8" x 45-5/8" x 20-4/8")
Weight		21.2kg (47lbs)	28.0kg (62lbs)	49.8kg (110lbs)
Externals Finish, Color		LINE-X®, Black		
Grille		16 gauge (1.6mm) matte black powder coated perforated steel grille		
Metal Handle		1pc (Top Board)	2pcs (Side Board)	
Pole Socket	Diameter	35mm (Bottom Board)		-----
Flying Hardware		3 x M10 (TOP L/R 1pc each, Bottom rear 1pc)		-----
-----		-----	-----	-----
Input Characteristic				
LINE/MIC switch: LINE				
Input Sensitivity	LEVEL : maximum	0dBu		
	LEVEL : "+4" indication	+7dBu		
Maximum Input Level		+24dBu		
Input Impedance		12kΩ		10kΩ
LINE/MIC switch: MIC				
Input Sensitivity	LEVEL : maximum	-25dBu		
Maximum Input Level		-11dBu		
Input Impedance		8kΩ		

0dBu is referenced to 0.775Vrms.

Specifications and appearance subject to change without notice.  
 All trademarks and registered trademarks are property of their respective owners.



P10022915



INTEGRAL **D**IGITAL TUNING INTELLIGENT **D**YNAMIC CONTROL  
 POWERFUL **D**IGITAL DRIVE EXTENSIVE **D**SP PROTECTION



# Experience the extreme.

Yamaha DSR Series takes portable loudspeakers to the extreme limits of their potential. Output levels pushed to the highest sound pressure levels possible, yet in cabinets that are lightweight and compact. Sound resolution remains superb, no matter how hard or for how long the speakers are driven. Designed by applying our leading-edge digital and acoustic technologies developed over decades, the DSR Series provides a listening experience that re-defines high definition sound reinforcement. For loudspeakers you can count on to deliver the musicality and sound that will thrill audiences night after night, let the DSR Series power your performances to incredible new heights.



## INTEGRAL **DIGITAL** TUNING

Ideal combination of ultra-precise 48-bit digital sound processing, advanced electronic and acoustic technologies delivers unparalleled high definition sound.

## INTELLIGENT **DYNAMIC** CONTROL

D-CONTOUR multi-band dynamic processing with intelligent sensing provide the ideal balance of dynamic sound with consistent clarity at any output level.

## POWERFUL **DIGITAL** DRIVE

Extremely powerful Class-D amplifiers featuring PFC full-resonance switching-mode power supply help deliver class-leading maximum SPL.

## EXTENSIVE **DSP** PROTECTION

Extensive DSP-controlled protection ensures reliable operation of all internal components: transducers, power amplifiers and power supplies.



**1300W** All full-range models

Active Loudspeakers

**DSR Series**

DSR112 DSR115 DSR215 DSR118W



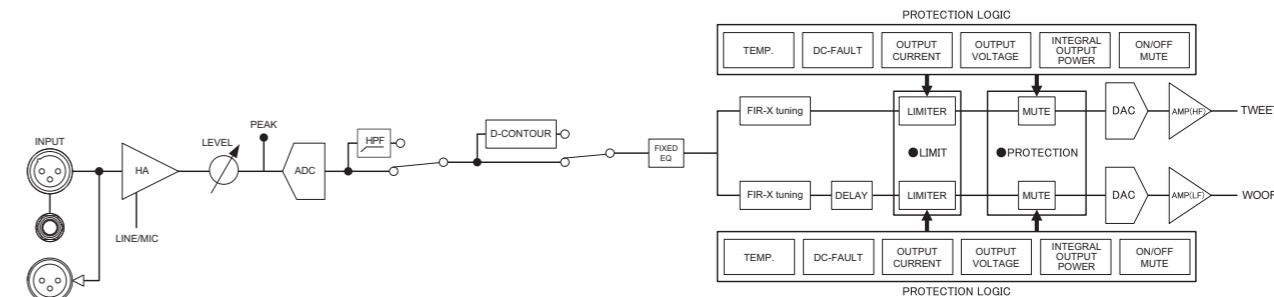
# Xtreme D-Powered by Leading-Edge Digital Technology

The DSR development team took full advantage of a number of advanced digital technologies, both new and refined, based on Yamaha's extensive experience accumulated over many long years of developing professional audio equipment. Leading-edge digital technological innovations incorporated into the DSR Series loudspeakers include Integral Digital Tuning, Intelligent Dynamic Control, Powerful Digital Drive and Extensive DSP Protection. These four "D" technologies combine to make possible the extreme performance capabilities of the DSR Series, hence the name: Xtreme D is born.



## INTEGRAL DIGITAL TUNING\* \* All full-range models.

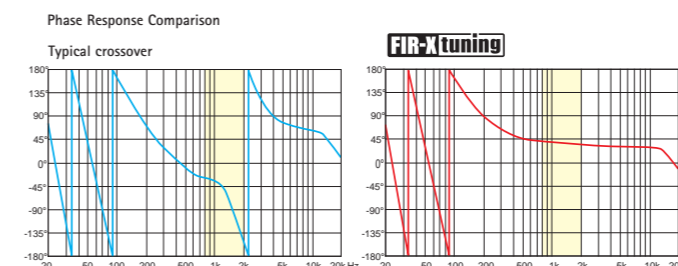
Ideal combination of ultra-precise 48-bit digital sound processing, advanced electronic and acoustic technologies delivers unparalleled high definition sound.



### FIR-X tuning™

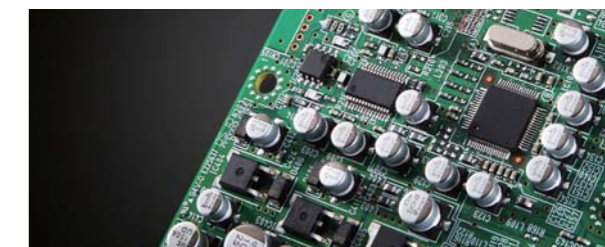
The digital crossover networks employ high-order FIR\* filters that provide linear phase response. Yamaha's proprietary FIR-X tuning™ simultaneously optimizes frequency and phase response, while adjusting the time alignment between the HF and LF transducers. The end result is sound quality with much better clarity and imaging than is possible with typical crossovers.

\* Finite Impulse Response



### High Performance Digital Signal Processor and 24-bit Discrete AD and DA Converters

All signals are precisely processed by a 48-bit internal processing (76-bit accumulator) high performance processor for optimum sound quality. The DSR Series employs high precision discrete AD and DA converters with superior S/N ratio and dynamic range. The analog signal is transmitted on dual channels, converted to digital and summed inside the processor. By using this algorithm, approximately 3dB of improvement in S/N ratio was realized.

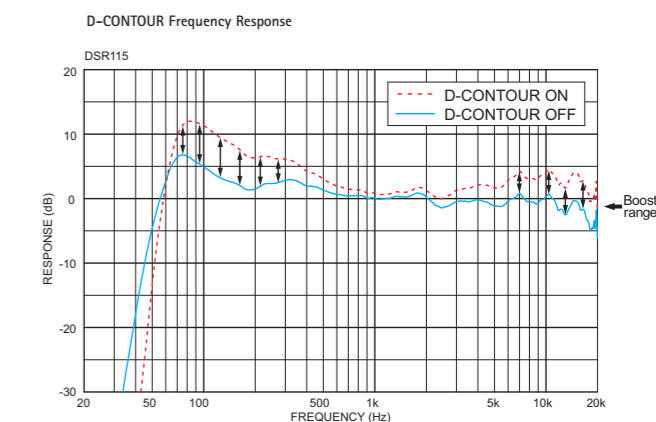


## INTELLIGENT DYNAMIC CONTROL\* \* All full-range models.

D-CONTOUR multi-band dynamic processing with intelligent sensing provide the ideal balance of dynamic sound with consistent clarity at any output level.

### D-CONTOUR (Dynamic-CONTOUR)

D-CONTOUR is a multi-band dynamic processor featuring intelligent sensing. Normally a compressor is used to boost SPL, but this would effect the entire audio bandwidth resulting in a constricted feel to the sound. D-CONTOUR works by constantly monitoring the output of multiple frequency bands, feeding the data back into the intelligent sensing system. This system then calculates the optimum EQ adjustments for each frequency band, resulting in maximum SPL while maintaining musicality. These EQ adjustments are performed in a highly intelligent manner, linked directly to the auditory response of the human ear. Hence the DSR Series can continuously deliver sound that is natural, clear and powerful - regardless of volume. D-CONTOUR can be turned on or off depending on the acoustic environment and type of sound desired.





## POWERFUL DIGITAL DRIVE

Extremely powerful Class-D amplifiers featuring PFC full-resonance switching-mode power supply help deliver class-leading maximum SPL.

### 1300W (LF850W, HF450W)\* High Power, High Sound Quality Class-D Amplifiers

Yamaha's next-generation Class-D amplifiers deliver as much as 1300W\* of power with precision damping for tight and crisp sound from compact, lightweight modules. Through the ideal combination of amplifiers, transducers and DSP, the DSR Series loudspeakers



provide the highest levels of power in their class and SPL up to 138dB, while maintaining precise dynamics and sound reproduction. Efficiency is such that convection cooling is all that is necessary, eliminating the need for fans. \* DSR118W: 800W

### High Efficiency Natural Convection Heat Sink and Internal Structure

The heat sink uses super-efficient cooling fins and is integrated with the aluminum diecast rear panel. Circuit boards are installed on the back of the rear panel, with all parts including the DSP, amplifiers and power supply laid out to ensure maximum heat conductivity. With the entire structure dedicated to preventing heat buildup, the service lifetimes of all components are significantly increased. Furthermore, the internal structure is designed to achieve the highest sound quality. For example, the DSP unit is completely shielded to separate it from the amp and power supply, preventing noise interference.

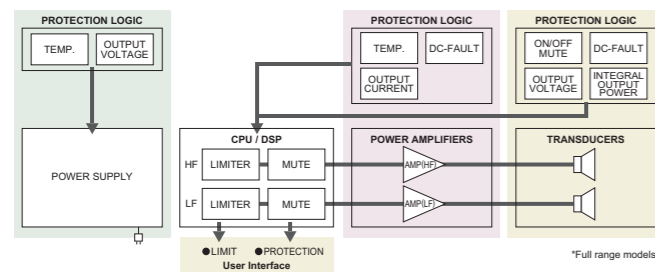
## EXTENSIVE DSP PROTECTION\*

Extensive DSP-controlled protection ensures reliable operation of all internal components: transducers, power amplifiers and power supplies.

### 3-Way Fail-Safe Protection

To ensure the highest possible reliability, the DSR Series employs many of the same protection functions used in our top-class TXn Series professional power amplifiers. These functions protect all aspects of the power supply, power amplifier modules and transducers so that they can operate to their full potential while ensuring reliable operation even under the most severe conditions.

\* The DSR118W is protected by an analog circuit.



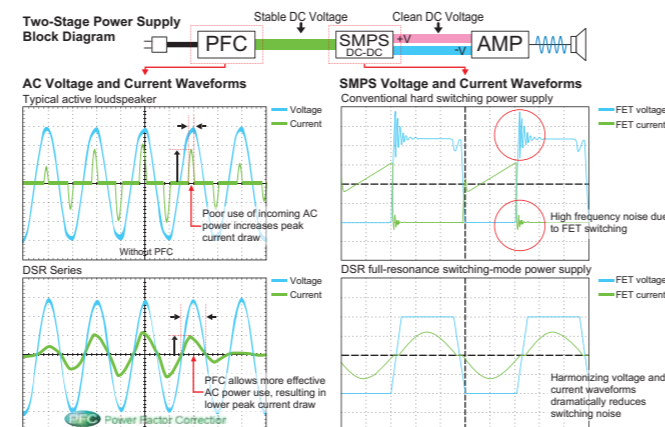
### Full-Resonance Switching-Mode Power Supply with PFC\*



The DSR Series employs a high efficiency switching-mode power supply with PFC. PFC harmonizes the phases of the load current and power supply voltage, maximizing power output and ensuring stable operation under severe conditions. The full resonance switching

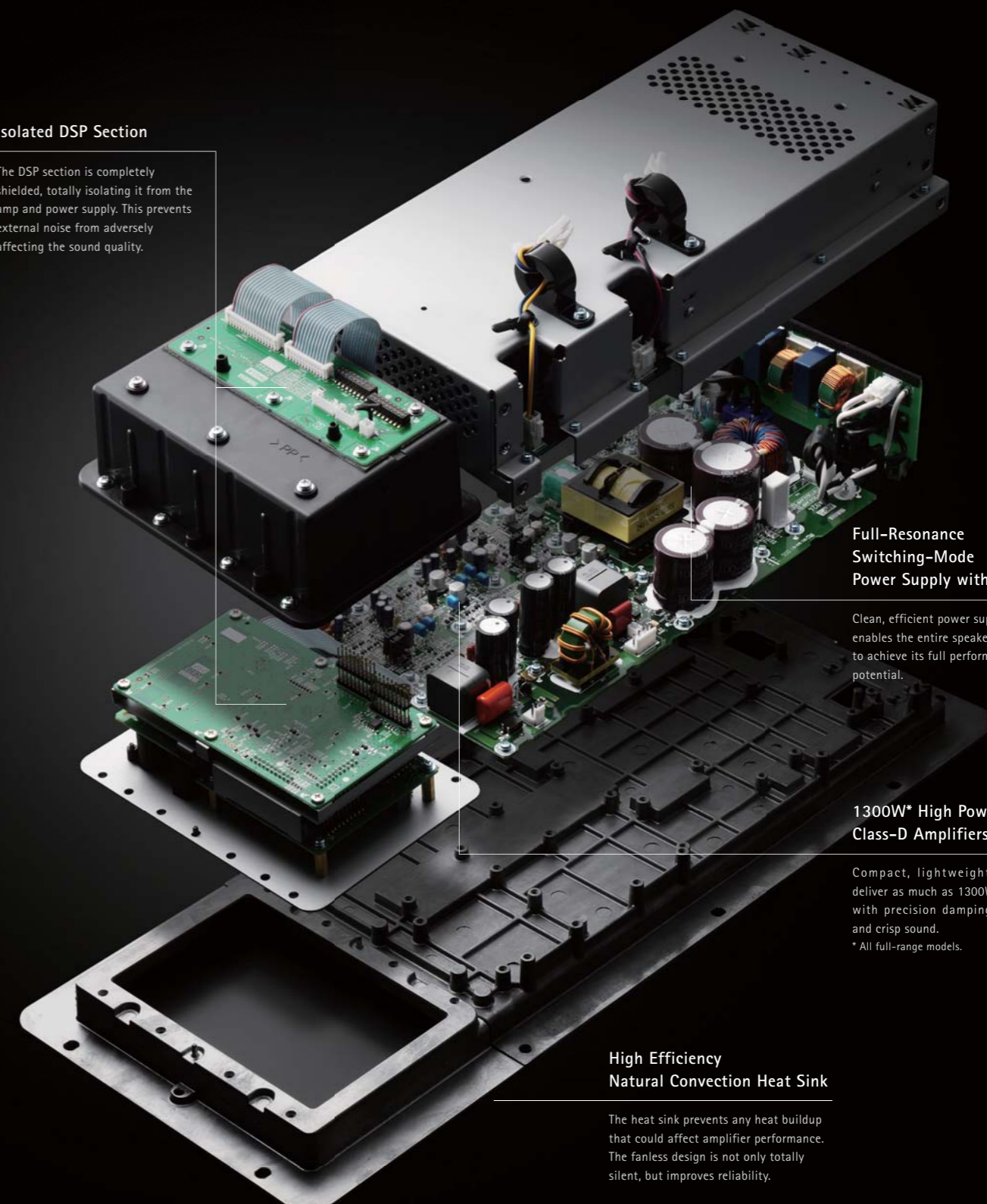


method uses both voltage resonance and current resonance, creating a clean power supply waveform with minimal high frequency noise. This clean, efficient power supply enables the entire speaker system to achieve its full performance potential. \* Power Factor Correction



### Isolated DSP Section

The DSP section is completely shielded, totally isolating it from the amp and power supply. This prevents external noise from adversely affecting the sound quality.



### Full-Resonance Switching-Mode Power Supply with PFC

Clean, efficient power supply enables the entire speaker system to achieve its full performance potential.

### 1300W\* High Power Class-D Amplifiers

Compact, lightweight modules deliver as much as 1300W of power with precision damping for tight and crisp sound. \* All full-range models.

### High Efficiency Natural Convection Heat Sink

The heat sink prevents any heat buildup that could affect amplifier performance. The fanless design is not only totally silent, but improves reliability.

### Switchable White Front LED

Each DSR Series loudspeaker has a white LED behind the front grille. When engaged, the LED illuminates while the power is on and also indicates the onset of system limiting. In addition, the brightness varies depending on the amount of limiting, so it is easy to monitor the status of the speaker from in front of the speaker system. This makes it easier to ensure that your mixer level is optimal, so you get the best sound from your DSR.





# Superior Electronic, Acoustic and Mechanical Technologies for Optimum Performance

The outstanding performance of the DSR Series is due to more than advanced digital technologies; these loudspeakers were designed without compromise, masterfully applying analog circuit technologies, acoustic technologies, and structural technologies. Transducers were scrupulously selected, then thoroughly customized. The waveguide horn was designed and optimized for the DSR Series requirements. The cabinet structure was thoroughly analyzed to maximize acoustic properties, durability, portability and versatility. As a result, the DSR Series offers reliability and functionality that meet the strict demands of professionals, deliver top-quality performance and are ideally suited for a wide range of applications.



DSR112 / DSR115 / DSR215 / DSR118W

	Transducer: LF	Transducer: HF	Coverage Angle	Power Rating	Max SPL
DSR112	12" cone, Neodymium	2" Diaphragm, Neodymium	H90° x V60°	1300W	134dB
DSR115	15" cone, Neodymium	2" Diaphragm, Neodymium	H90° x V60°	1300W	136dB
DSR215	2x15" cone, Ferrite	2" Diaphragm, Neodymium	H90° x V60°	1300W	138dB
DSR118W	18" cone, Ferrite	-	-	800W	132dB

## Premium-Grade Custom-Designed Transducers

The transducer is all important in determining the sound quality of a speaker. For the DSR Series, we thoroughly analyzed a wide range of transducers, choosing low-distortion units that provide extremely flat frequency response, wide dynamic range and high power handling. They were further customized to match the properties of each speaker's cabinet and power amplifier combination. The result is a loudspeaker system with impressively deep bass, exceptionally clear mid-range and accurate high frequencies up to 20KHz.

- HF: The high frequencies of all full range models are handled by a 2" titanium diaphragm neodymium compression driver capable of reproducing incredibly transparent, accurate high frequencies up to 20kHz. The 2" voice coil is large for this class of speaker. It provides high power handling for powerful sound with low distortion even at high outputs. The HF transducers use lightweight, compact neodymium magnets, significantly contributing to the low weight of the loudspeaker system for easy portability. Thanks to these high performance components, the DSR Series exhibits superior dynamics even at high volumes and extremely clear vocals for superb performance in a wide range of environments, from small venues to large halls and outdoor PA.



HF transducer

- LF: The DSR Series cast aluminum woofers boast a large 3" voice coil\*, and the DSR112 and DSR115, designed for easy portability, have light, strong neodymium magnets. This makes the speakers lightweight yet capable of delivering awesome power with warmth and deep bass response. The woofers' superior bass range control and reproduction of mid-bass vocal presence produces fast, powerful bass that does not affect the contour, achieving sound with minimal distortion, even during high volume outputs.

\* DSR112/115/118W

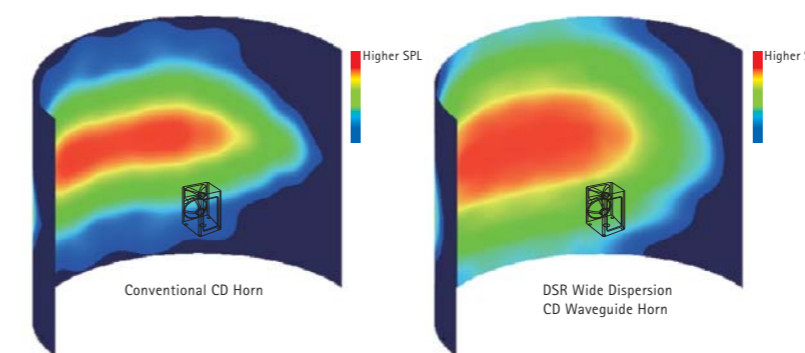


LF transducer

## Exclusive Wide Dispersion CD Waveguide Horn

The DSR Waveguide Horn was designed with the goal of minimizing the radiation pattern deterioration in oblique directions seen in conventional horns in order to achieve a more ideal coverage area without irregularities. With the new Wide Dispersion CD Waveguide Horn, sound expands in a more rectangular pattern, providing 90° horizontal x 60° vertical coverage with wide frequency sound projected all the way to the edges of the coverage area. This uniformly balanced output and high sound quality throughout the listening space maximizes audience satisfaction.

### Waveguide sound pressure distribution comparisons



Wide Dispersion CD Waveguide Horn

## Reliability and Functionality to Meet the Highest Professional Standards

In addition to minimal size and lightest weight for portability, the DSR Series loudspeakers are designed to achieve excellence in both physical and electrical reliability. They give you the assurance of worry-free operation for many years.



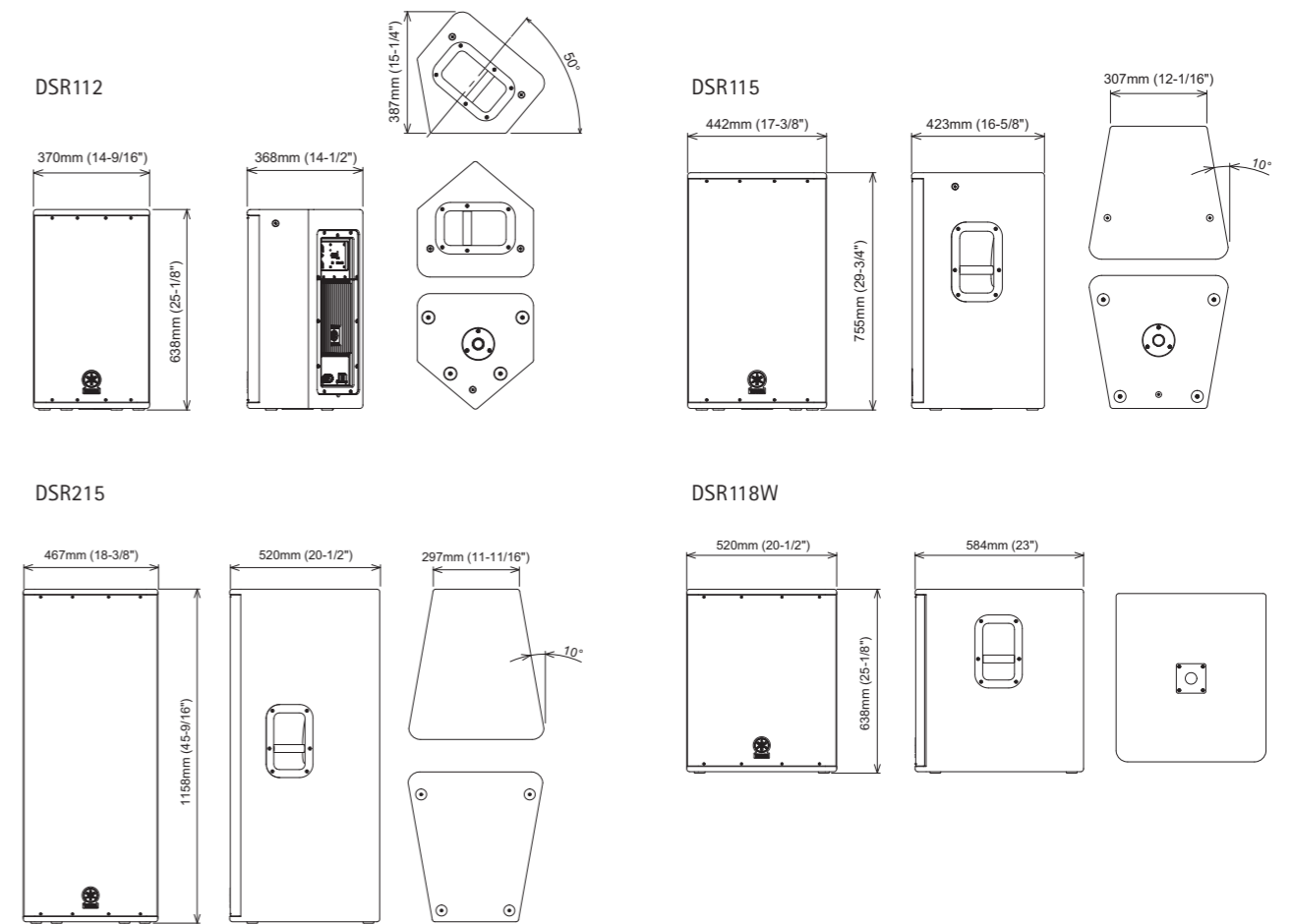
- Newly designed deep pocket handles are highly robust yet lightweight and providing comfortable handling, further improving portability. These handles are not only ergonomically correct, they also minimize performance impairing resonances inside the cabinet.
- Heavy-duty powder-coated 16-gauge(1.6mm) steel grilles protect internal components from the rigors of road abuse.
- The exteriors feature a LINE-X® coating with extremely high damage resistance to protect the cabinet from scratches during transport and use. This coating is also very resistant to deterioration over time, maintaining a professional appearance that can withstand many long years of use.
- Every DSR Series loudspeaker has a locking IEC power connector and cable. Just push in the AC cord during transport and use to create a positive lock with the amp module, so there is little chance of accidental disconnection during a performance. If damaged or lost, the locking cable can be easily replaced with a standard IEC cable if needed.

## Versatility for Wide Range of Applications

The four easy-to-handle, flexible DSR Series models are well suited for various specific needs, making them ideal for a wide range of professional applications. The DSR112 and DSR115 cabinets have a 35mm pole socket for stand or pole mounting and integrated M10 rigging points for suspended applications with standard eyebolts\*. The DSR112 can be angled for use as an onstage floor monitor and additional monitors can be daisy-chained via the XLR THRU socket on the rear panel. All full-range models also feature XLR and 1/4" TRS jack inputs that accept both mic and line level inputs. \*eyebolts not included.

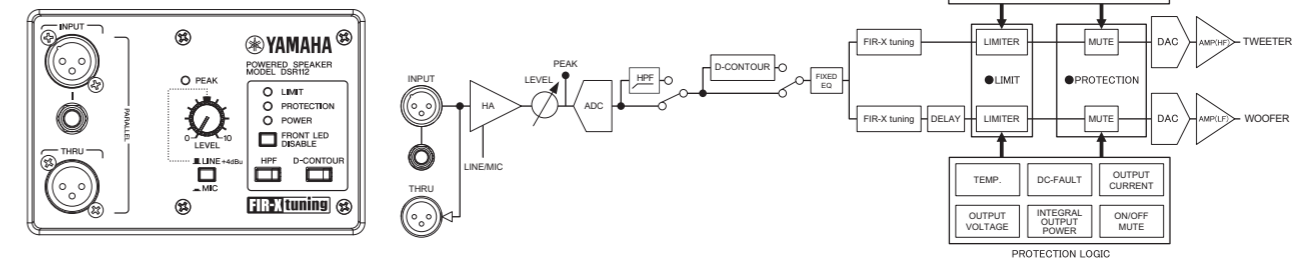


## Dimensions



## Rear Panels & Block Diagrams

Full range: DSR112 / DSR115 / DSR215



Subwoofer: DSR118W

