

DSA 500 RT



 **Performance**
CREATE YOUR SOUND

 **FOCAL**[®]
THE SPIRIT OF SOUND

DSA 500 RT: active digital subwoofer, real 2.1 system !

Are you passionate about your beautiful powerful car? Do you want to create a sound system that reflects who you are? The Performance range, innovative and dynamic, delivers sound to make your spine tingle. Ultra-technical and assertively designed, Performance was conceived to bring extreme sensations. If the traditional Access line marks the entry-point to this universe, you can push the limits of your creativity to their very peaks with the Expert range. Power and fidelity work hand in hand: "live" sound in all its dimensions for the most demanding audiophile.

The power of the digital audio world at the service of electro-acoustic performance!

Although the majority of today's vehicles boast a standard integrated audio system, the most demanding users are seeking flawless superior on-board sound quality... Focal is launching its new complete amplification solution, directly inspired by the Expert line requirements: DSA 500 RT.

Changing the original speakers is often the first step in improving on-board sound quality, but running them with the best of signals is really something to think about with regards to the system's outright performance! Thanks to its wealth of technological innovations, the DSA 500 RT combines high performance, power and compactness.

THE DSA 500 RT is an Active Digital subwoofer that comprises :

- A Digital Signal Processor offering a wide range of tuning possibilities through The "FOCAL MANAGER RT" graphic user interface.
- 3-channel class D amplifier (2 x 65 Watts rms + 1 x 165 Watts rms) which pushes back the limits in terms of power and listener comfort.
- Active bandpass long stroke subwoofer.

A simple answer

DSA 500 RT provides an effective solution to combat the 3 main weaknesses encountered with car audio systems:



Available remote control, rear view

PRECISION

Texas Instruments® embedded DSP enables very precise adaptation whatever the type of car or audio balance preferences. A special audio algorithm takes care of the digitised signal prior to amplification.

POWER

Original and after-market car radios often feature limited power capabilities. DSA 500 RT delivers the missing supply of current, optimising the control of bass frequencies and distortion and including instances where extreme power consumption has to be handled.

BASS EXTENSION

The DSA 500 RT is primarily a subwoofer : THE low frequency extension solution, which resolves potential vibration issues. As such, you avoid stretching the limits of the system and putting strain on the door speakers.

If you ever dreamed of driving your favourite car testing its limits, what could be better? Add glorious sound to match the dream, the DSA 500 RT is able to improve the music performance.



Join the DSA 500 RT community...

Connected?

The "FOCAL MANAGER RT" is created and developed solely in France and is a **graphic user interface specially designed for the DSA 500 RT**. The software comprises a step by step beginners' guide with a dynamic help tool, which can be activated if need be. Experienced users can directly access the expert **tuning features, such as time alignment and compressor/ expander release settings**. The interface enables real-time audio modification so the user can immediately appreciate the effect tuning has on the audio rendering. To assist the user in this process, **the real-time connection is accessible via remote control**, using the supplied mini USB adapter. A feature involving the upload of presets is proposed for sharing on a dedicated web service. A filtering database, organized by car types, allows preset selection and downloading to try different tuning configurations shared by other users.

Compatibility / inputs

Whatever the vehicle, thanks to a net volume of just 14 litres and an **"all inside" concept, the boot space and practicality are retained**. Sophisticated internal manufacture enables a combination of infrabass extension and vibration dampening. The DSA 500 RT provides high-level inputs for **OEM source compatibility and classic RCA inputs** for connection to **after-market car radios**. A preamp output is available to link to a complementary system if required.

Electronics – 4-layer PCB

With 600 Watts available, the power supply module is specifically designed for audio applications and the supply of energy is excessive and fast (low resistance), **resulting in optimal control of audio "transients"**. With a surface area of just 6x8cm, spread over a 4-layer PCB, it ensures constant performance even on audio content requiring **sizeable dynamic scope**. Equipped with special self-induction filters inductors manufactured according to strict Focal specifications, the class D amplification is virtually on a par **with AB class performances**, while the THD is approaching 0.07%. The Texas Instruments® audio processor offers comprehensive digital PWM (Pulse Width Modulation) management from the input to the 300 Watts of the final stage amplification.



DSA 500 RT has been awarded the CES Innovation 2013

...performance within your car and fulfil your desire. The digital subwoofer helps to create a huge sound stage and yes... Finally your dream comes true, perfect sound for a perfect drive.





DSA 500 RT

600W compact D class amplifier - PWM inputs

High and low level audio inputs for OEM and after-market head units compatibility RCA	✓
Preamp outputs for optional external device	✓
Dimensions (WxHxD)	23 ^{5/8} x8 ^{1/4} x12 ^{3/16} (600x210x310mm)
Weight	28,7 lbs (13kg)

Front channels

RMS power - 14.4V - 4 Ω - THD+N < 1%	2x65 Watts 
2 Ω stable	✓
Frequency response (equalizer off / -3dB)	45Hz - 22KHz
Channel separation - 4 Ω - @1 kHz	>70dB
Distortion - 4 Ω - @1 kHz (with low-pass filter 22 kHz)	0.07% between 8 and 45 Watts

Subwoofer

RMS power - 14.4V - 4 Ω - THD+N < 1%	1x165 Watts 
Specific speaker	6x9 long stroke
Acoustical Frequency response	45Hz - 140Hz
Remote control	available



Digital Signal Processor

- Low latency DSP (<1,5ms)
- Real time "FOCAL MANAGER RT"
(mini USB on external remote control)
- Windows Xp / Vista / Seven / 8 and Mac OS X from 10.6 version



Fonctions

- Crossover control (subsonic / highpass / lowpass)
- 7 bands full parametric equalizer
- Staging parameters and delays (170ms - steps of 0.01ms)
- Compressor/expander
- Sub phase invert (0 / 180°)
- Gains

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