PRODUCT CATALOG\_01

# ISTINTO INNOVATIVO

# audison



# audison

### audison

# AUDIOPHILE IN-CAR SOUND SINCE 1987, WHERE INSTINCT MEETS INNOVATION.

STINTO INNOVATIVO	4
BIT DRIVE TECHNOLOGY	6
OSP AUTO TUNING TECHNOLOGY	12
3-CON	16
3-CON go	18
FULL DA HD	20
FORZA DSP AMPS	22
FORZA COMPANION AMPS	28
FORZA ACCESSORIES	32
BIT	34
BIT ACCESSORIES	42
/OCE	44
SR	54
PRIMA	60
ELETTROMEDIA	98





# A NEW, COMPREHENSIVE APPROACH



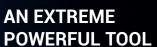
# bit Drive





"Audison's bit Drive software is the perfect tool to get the most out of the company's latest and future - DSP-based devices, whether entry - level or high-end. By adapting to the model being controlled and presenting its advanced functionality across a new, intuitive GUI, it brings ease of use and speed to complex tasks and makes configuration with standard systems a breeze. Input functions include manual and automatic de-EQ, de-time and sensitivity calibration, plus input linking, mixing and polarity. The tuning section is equally in-depth, with improved crossover controls for slope and frequency selection, advanced EQ options, and independent channel adjustment. Support for electrical and acoustic measurements via a USB mic is just another feature of the bit Drive's unprecedented 'tool box'."

# NEW GRAPHICAL USER INTERFACE





### **IMPROVED USER CONTROLS**

for selecting frequency, channel, slope, and bandwidth



### **INTEGRATED HELP**

each core functional area contains one-click guidance



### **INFOTIP SUPPORT**

hover the cursor overan icon to see its definition



### **COLOR-CODED LINKING**

of the interface controls to the selected channel keeps the technician always focused on the proper



# INTEGRATED ELECTRICAL AND ACOUSTIC MEASUREMENT AND ANALYSIS

without leaving the application A compatible USB mic is required for acoustic RTA





### THE ACOUSTIC RTA

is integrated into the equalizer graph and is compatible with an external USB microphone.



### QUICK I/O CONFIGURATION

speeds up system definition and signal routing.



### INPUT PHASE COMPENSATION

Allows left and right inputs to match in phase before tuning, even if OEM phase processing has been used.



### THE ELECTRICAL ANALYSIS INTEGRATES

the response graph into the input equalizer display, ensuring efficient tuning.



### INPUT EQUALIZER COMPENSATION

Automatically sums and reverses OEM equalization.



### INPUT DELAY COMPENSATION

of time-delayed factory outputs prior to signal summing.



### **FEATURES:**

- Improved crossover slope/frequency selection controls
- Includes Acoustic RTA measurement in the EQ display Adds cancellation management tools
- Use the following tools to match Left and Right to the target:

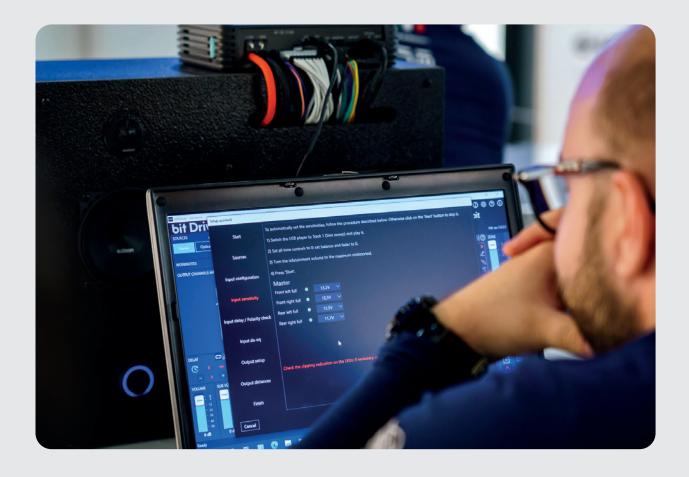
  - Level Polarity
  - EQ Parametric, Graphic, Phase
  - Notch
  - Shelf
  - Phase all-pass filters Delay



# OEM INTEGRATION COMPARE, CORRECT, CONFIRM

The Configuration Wizard makes setup faster than ever, and Audison R&D has upgraded the OEM Integration section and the acoustic Tuning controls section with more powerful tools.

Automatic Routing in Configuration Wizard speeds up configuration; manual controls allow unlimited possibilities.





# INITIAL SYSTEM SETUP SPEED EQUALS EFFICIENCY

- · Auto crossover settings preloaded for Audison speakers
- Options for automatic Input de-Eq, de-time and sensitivity calibration
- Electrical RTA onboard with integrated Input channel EQ and Input delay correction.
- Measure, compare and correct the OEM signals for amplitude, phase, polarity, time.
- Automatic and manual tools to correct and sum OEM signals. The process includes De-EQ, De-Phase, De-Time.

- Final Tuning EQ for fine-tuning the result without damaging the left/right response symmetry.
- Electrical RTA of the output's signals: measure the output while tuning.
- · Edit, activate, bridge at any time.
- · Full mixing and polarity control.

# DSP AUTO TUNING TECHNOLOGY

Audison bit Tune is the advanced tool ensuring auto tuning technology for Audison processors, quickly providing maximum audio performance. The Audison team's goal in developing the bit Tune was to automate the setting of basic parameters for the calibration of the bit processors (time alignment, equalization, phase, levels, etc.), ensuring an excellent level of audio performance.

### Some bit Tune features:

- PROCESSOR AUTO SETUP
- SOURCE CHECK
- RTA
- POLARITY CHECK
- OSCILLOSCOPE
- POWER METER
- DISTORTION METER
- GENERATOR
- PLAYER
- BATTERY TEST
- OPTICAL CABLE TEST





# PERFECT SOUND HAS NEVER BEEN SO EASY!



THE BIT TUNE SYSTEM COMES PACKAGED IN A PROFESSIONAL CARRYING CASE, COMPLETE WITH ALL OF THE ACCESSORIES REQUIRED FOR ITS USE.

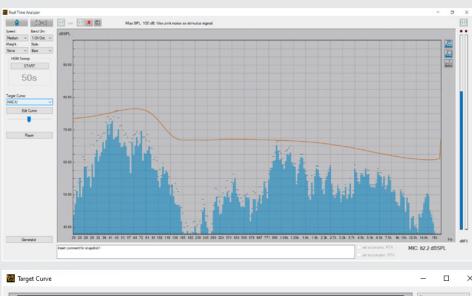
The HSM - Hearing Simulation Mic it's a disc-shaped microphone with 5 high-quality microphone capsules arranged around half of its circumference designed to reproduce the polar response of the human auditory system.

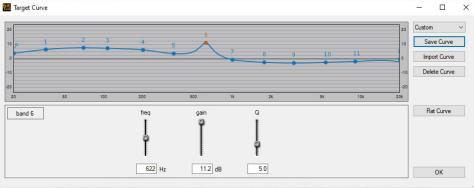
LPM - Level and Polarity Mic. is a single-capsule microphone, used for setting system levels and for checking the acoustic phase of the speakers.

CMU - Central Measurement Unit is the "brains" of the system, acting as an interface between the acquired/generated data and the PC based management software.

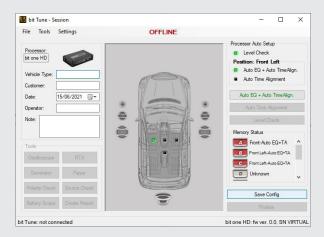
### **HSM SWEEP**

HSM Sweep isn't a live real-time measurement - like RTA measurement- but it uses the RTA user interface. Use HSM Sweep to take a 5-microphone spatially averaged measurement. It takes less than a minute to perform, and the results allow faster tuning with better results.





The Target Curve editing tool supports exporting and importing to create a curve from scratch, or based on an existing one.





When used in conjunction with compatible Audison DSP, the Percept algorithm lets Mobile Phase Correction measure the acoustic phase at the listening position and correct it using FIR filters. Get better phase linearity than ever before!





The development of Audison APM is the result of years of research and development into a complex topic, the evaluation of in-car sound quality. Many people in the industry have been talking about measuring acoustic performance without ever having achieved a tangible result up to now.

Thanks to the capabilities of APM, sound quality evaluation is no longer influenced by the preferred music genre of the listener. The APM technology is able to replicate the auditory perception of humans and therefore to measure the system performance with a high level of precision.

The bit Tune hardware platform implements APM functionalities providing the market as well as industry specialists with a complete tool, enabling two innovative types of analysis which objectively evaluate customized and OEM car audio systems.



bit Tune + dummy head optional





bit Tune Splash scr een with APM tool

The asymmetric listening position affects the quality of in-car sound reproduction. Placing the front soundstage at the center of a car hi-fi system is the most critical and challenging element. For this reason, Audison R&D developed APM, a dedicated analysis tool for the automatic localization of the virtual sound image generated by a stereophonic configuration.

# HI-RES BLUETOOTH RECEIVER



Audison B-CON is a Bluetooth 5.0® streaming device designed for automotive use that has obtained the Hi-Res audio wireless certification from JAS (Japan Audio Society). B-CON is the ideal choice for streaming audio from a Hi-Res player (Fioo, Sony Walkman...) and from the latest generation Android/Apple mobile devices.









### absolute volume

B-CON manages the Master Volume of the DSP while keeping the digital stream at full potential dynamic range - avoiding the loss of resolution that occurs when applying the handset's volume commands to the audio stream.

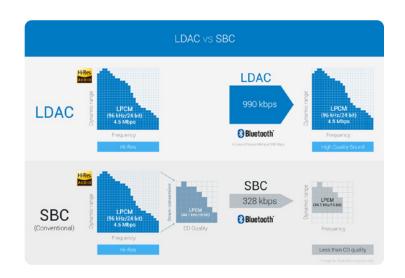




Absolute Volume requires an ADC port, present on bit Virtuoso and Forza bit DSP amps line.

### LDAC HIGH-PERFORMANCE CODEC

B-CON is compatible with LDAC codec, available in many Android phone handsets, as well as many audiophile digital-media players. Our stringent lab testing shows that over the highest-quality LDAC connection, the analog frequency response reaches 40kHz - and this is the mode that earned the B-CON the "High Resolution" certification from the JAS for an outstanding audio quality.



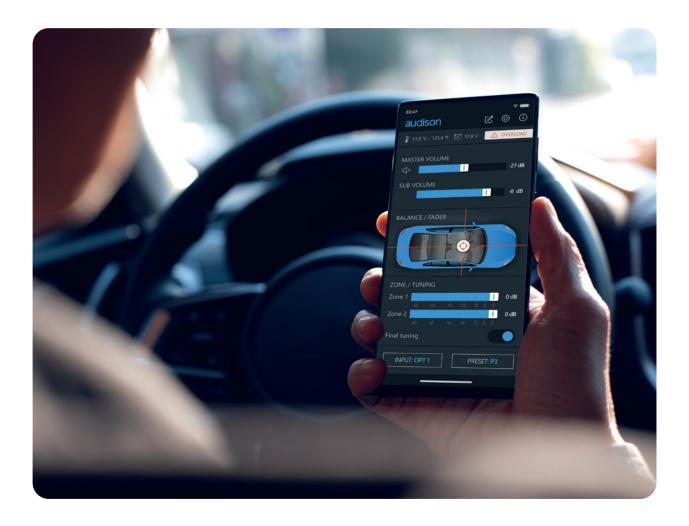


# B-CON go



Discover a new way of control with B-CON Go app, designed to seamlessly interface with your compatible Audison bit processor.

With its cutting-edge Bluetooth connectivity to the Audison B-CON, this app empowers you to delve into a realm of bit processor customization like never before. Seamlessly integrate your device and Audison processor, and embark on a journey of control that's as intuitive as it is transformative.





**Input Source Selection:** Seamlessly switch between input sources, effortlessly toggling between various audio devices. Whether it's your smartphone, OEM head-unit, or any other compatible source, B-CON go ensures uninterrupted access to your desired sound source.

Streamlined Streaming Playback: Immerse yourself in a world of wireless audio streaming through B-CON go's unparalleled connectivity. Effortlessly pair your device to the Audison processor, granting you the freedom to enjoy your favorite tracks with stunning clarity and depth.

Comprehensive Functionality: B-CON go presents a comprehensive suite of functions at your disposal, ranging from fader/balance and Forza DSP amps status monitoring (temperature, voltage) Harness these features to sculpt your audio landscape with precision, crafting an experience that resonates with your unique tastes.

**Intuitive User Interface:** Designed with user-friendliness in mind, B-CON go's interface is both elegant and user-intuitive. Navigating through the app's functionalities is a seamless experience, ensuring that your focus remains firmly on the music.



# FULL DA HD THE NEXT AUDIO EXPERIENCE



The availability of Hi-Res player is a great opportunity to reach new mobile hi-fi milestones, Full DA HD technology, making the most of the listening experience of Hi-Res audio files, provides pure digital signal transfer from the source through the processor into the amplifiers, all in 24 bit/96 kHz Hi-Res digital format.











Thanks to Audison, it is now possible to enjoy an audio system free from the limitations and signal alterations of a traditional analog system.

# REDISCOVER MUSIC NUANCES, FEEL THE DIFFERENCE

# FORZA

# bit Drive

# NEXT-GENERATION TUNING CAPABILITIES FOR MAXIMUM CONTROL

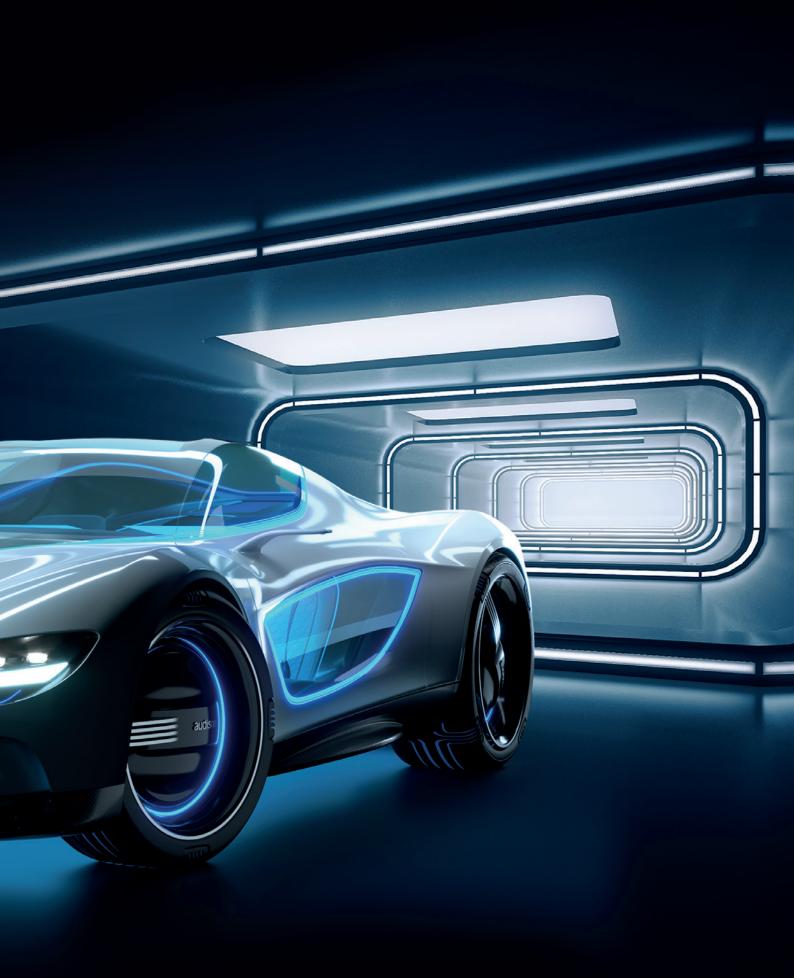
Audison Forza bit amplifiers with built-in DSP, features bit Drive PC software to analyze, route, and correct the signal in new ways. The new Graphical User Interface simplifies every control and function, integrating acoustic measurement, and ensuring efficient tuning and a perfect sound!

# DSP AMPLIFIER BIT POWERED SOLUTIONS





Forza on Audison website



# AUDIOPHILE SOUND YOU EXPECT FROM AUDISON



Audison Forza amplifiers boast more power than ever, with the audio performance of the latest-generation Audison D-Class technology. ADT uses a switching frequency twice as fast as many other modern Class D amplifiers. Higher switching frequencies require incredibly precise timing, which require higher-tolerance components to be used to keep the timing pulses from overlapping. Audison uses very high-tolerance component parts to keep the timing correct even during temperature extremes. To Audison, this is worth the cost, since the higher switching frequency of Audison Class D moves noise much farther away from the audible band. Audison Class D also uses a steeper 4th-order analog lowpass filter, rather than the simpler 2nd-order lowpass filters usually used in competing designs. The steeper filter will keep noise much lower in amplitude - which is good for controlling EMI and for preventing infrasonic noise getting to the tweeters. It also keeps phase shift outside the audible range. The cost is higher - twice as many components are needed for a 4th order filter compared to the usual 2nd-order filter, and each output channel needs its own filter - but Audison determined through exhaustive listening testing that this design was the best-sounding approach.



Audison Forza amplifiers are designed to reproduce highresolution audio with greater accuracy and fidelity than standard amplifiers. The native DSP working at 24 bit/96 kHz extend the audio band up to 40 kHz earning the coveted High-Resolution certification assuring that:

- Forza built-in DSP handle high-resolution audio formats such as FLAC, WAV without down-sampling or loss of quality.
- Forza line use high-quality digital-to-analog converter (DAC) that offer greater resolution and accuracy.
- 3.

  Forza amps have high SNRs, which means that they can produce clear and detailed audio even at low volume levels.



Fully Bridgeable means that every channel pair can be bridged, without exclusion, letting Audison dealers design and build exactly the system you're looking for

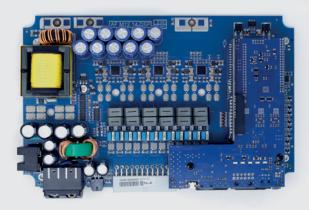
# absolute volume

Absolute Volume maximizes the SPDIF bit depth, delivering uncompromised dynamic range from compatible digital sources like Audison B-CON.





Two independent power supplies for audio amplifier and DSP to maintains DSP microprocessor operation even during start/stop operation.





Thanks to the Maestro AR interfaces, Audison AF Forza amplifiers can operate in the same manner - receiving pure, unprocessed sound which has not passed through the OEM amplification-and-processing stage, and integrating all the essential non-entertainment signals required in modern vehicles!

## 14 dsp outputs

The new Forza built-in DSP offers up to 14 DSP-processed output channels obtaining greater accuracy without the noise, distortion, and degradation that can occur in analog processing. With digital processing, you can easily adjust parameters such as volume, EQ, phase, delay without introducing noise or other artifacts. DSP offers a range of benefits over analog processing, including greater accuracy, flexibility, reliability, compatibility, and improved signal quality.

# 12 inputs

Forza's eight analog inputs, plus an optical Toslink digital input, support total connectivity even with the most complex OEM systems. If more analog inputs are required, the optional F4IN expansion card adds four additional analog input channels!



Universal Speaker Simulator technology on high-level inputs for maximum compatibility with any type of Head-Unit OEM Source.



Audison Forza bit amplifiers feature a complete programmable port for serial communication with external compatible devices like Audison B-CON.

# DSP AMP MAX





"When a car is premium class, buyers naturally expect the sound system to be similarly highend - but this is often not the case. Step forward Audison's AF M12.14 bit, a compact, premiumgrade all-in-one unit, which incorporates advanced Analog Devices' ADAU1467 DSP with de-EQ, de-Time and de-Phase processing to 'clean' the signal coming from the car's audio system. The sound is then calibrated to the original or aftermarket speakers and amplified by a 12x60W, fully bridgeable, high-efficiency Class D amplifier with dual power supply. The core DSP is controlled by Audison's powerful, next-generation bit Drive software platform. Overall, the AF M12.14 bit is a brilliantly engineered, and highly impressive, sound system upgrade."



AF M12.14 bit 12 X 90 W RMS @ 2Ω - 14 CH DSP





**AF M8.14 bit** 8 X 140 W RMS @ 2Ω - 14 CH DSP



AF M5.11 bit 4 X 150 + 1 X 600 W RMS @  $2\Omega$  - 11 CH DSP



AF M1.7 bit 1 X 1200 W RMS @ 1Ω - 7 CH DSP

### **KEY FEATURES**

- Improved audio performance and power thanks to the latest generation of ADT (Audison D-Class) technology
- Unbeatable power/volume ratio reaching 82% of efficiency.
- bit Drive software platform featuring:
  - Electrical signal analysis for each input channel
  - Acoustic analysis with external USB microphone
  - Advanced signal routing options
- Hi-Res performance, with an extended audio band up to 40 kHz, made possible by and DSP working operation at 24 bit/96 kHz
- Up to 14 DSP controlled output channel
- 8 high/low-level inputs (and an optical Toslink digital input) support total connectivity even with the most complex OEM systems

# DSP AMP COMPACT

























# **COMPANION AMP**



AF companion amplifiers are designed to add powerful amplifier channels to AF bit processor amplifiers. A plug-and-play signal input harness is included to make connection to AF bit amplifiers straightforward. AF companions have a "straight wire" architecture and are intended for use with external processors.







They feature the audiophile sound of the latest generation Audison D-Class technology. Higher switching frequencies, steeper filtering, and higher-tolerance components deliver sound above and beyond the expectation of Class D – in an amazingly compact package!



The audio band is extended up to 40 kHz earning the coveted High-Resolution certification.



Bridging channel pairs results in double power, guaranteeing flexible and superior performance.



Universal Speaker Simulator technology on high-level inputs for maximum compatibility with any type of Head-Unit OEM Source.

# COMPANION AMP MAX





AF M6D 6 X 220 W RMS @ 2Ω



AF M4D 4 X 260 W RMS @ 2Ω



AF M1D 1 X 1200 W RMS @  $1\Omega$ 

### **KEY FEATURES**

- Improved audio performance and power thanks to the latest generation of ADT (Audison D-Class) technology
- Unbeatable power/volume ratio reaching 82% of efficiency.
- Hi-Res compatibility performance, with an extended audio band up to 40 kHz
- Maximum versatility thanks to the possibility of using the bridging option for each pair of power outputs



# COMPANON AMP COMPACT













# **ACCESSORIES**

### **DRC AC**

COMPACT DIGITAL REMOTE CONTROL



DRC AC enables primary system control: main volume, secondary volume, source selection, memory selection, global eq.



Compatible with all Forza bit models.

### **DRC MP CAN**

HI-END DIGITAL REMOTE CONTROL





DRC MP CAN, with OLED display, enables the full system control.

Compatible with all Forza bit models.

# **ACCESSORIES**

### F4 IN

ANALOG INPUT EXTENSION CARD





The F4IN adds four analog highlevel input channels to the AF bit native eight, thus reaching twelve high-level (SPK IN) inputs. F4IN brings the SPK IN inputs sensitivity range from 2.2 ÷ 22 VRMS to 3.2 ÷ 32 VRMS allowing a perfect integration in advanced OEM systems.

Compatible with all Forza bit models.

### F20

DIGITAL INPUT EXTENSION CARD





The F2O adds an additional Coaxial S/PDIF or a second Toslink S/PDIF input. The type of additional input can be selected by the switch mounted over the card itself. In case the Coaxial S/PDIF input is selected, it is possible to use the Coaxial input cable included in the card box.

Compatible with all Forza bit models.

# bit

audison

# DON'T CALL IT DSP, IT'S AN AUDISON BIT

In 2008, Audison presented the bit One, the DSP that has changed car audio forever, introducing source de-equalization and automatic input sensitivity setting, key technologies for integration with OEM systems. From this unique background, Audison ISTINTO INNOVATIVO has developed the full range of bit processors, confirming their leadership.



### bit

### **BIT TECHNOLOGIES GLOSSARY**



processor meets the 24 bit / 96 kHz native processing requirement of Japan Audio Society.



pure digital signal transfer with a resolution up to 24 bit / 96 kHz



Analog Device SHARC™ series chip with floating point precision, to reach the highest audio quality



linear phase filters and equalizer, for a new in-car listening experience



Auto tuning by Audison bit Tune and communication with bit Drive portal pass-through

I/O routing approach dedicated to OEM sound system (hi-level), that is literally based on "passthrough" the existing OEM infotainment's output channels



de-equalization function to "flatten" any equalization applied by default by OEM sources



Input delay compensation of time-delayed factory outputs prior to signal summing



Compensation of the overall system phase to recreate the original signal, even in case of OEM sound enhancement algorithms



APC (Automatic Polarity Correction) Polarity check of inputs wire and automatic correction in case of inversion



USS technology allows bit processors to work with headunits featuring the "speaker load detection" circuit (automatic routing)

I/O routing approach based on signal summing, signal reconditioning & flattening. With this setup mode, automatic algorithm options named DE-EQ / DE-Phase, DE-TA, Polarity check and Auto Input Switch can be selected.

absolute volume

Absolute Volume maximizes the SPDIF bit depth, delivering uncompromised dynamic range from compatible digital sources like Audison B-CON.



# **AUDIO PROCESSOR**



Just as the virtuous performer holds the absolute mastery of the instrument and the technique connected to it, the bit One HD Virtuoso features unique skills dedicated to the most ambitious OEM Integration projects and excels in the uncompromising Hi- End systems.

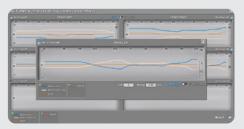
bit One HD VIRTUOSO makes the most of Hi-Res audio, providing the ability to develop a Full DA HD system featuring up to 13 channels. Thanks to the powerful floating-point Sharc™ series DSP, the audio signal is not subject to any down-sampling, preserving all the information of the Hi-Res digital file reproduced. Audison bit One HD VIRTUOSO achieves the same audio quality as professional digital workstations within the car compartment. The DRC MP remote control supplied is the perfect interface between the bit One HD processor and the user.













#### **INPUT ANALYSIS**

A guided configuration routine automatically synchronizes the input audio channels, which are often time-delayed from the OEM source or amplifier, prior to the signals summing. The advanced de-equalization, featuring linear-phase FIR filters, flatten the OEM system frequency response and compensate the overall system phase automatically to obtain an unparalleled reconstruction of the original signal, even in case of OEM sound enhancement algorithms.

#### THREE EQUALIZATION STAGES

For an absolute control of the car compartment acoustics, the R&D team has introduced three equalizers based on FIR and IIR filters:

Input EQ to flatten the curve based on the input selected

Channel EQ - up to 13 parametric eq point per channel to adapt the frequency response Main EQ - to shape the sound of the entire system according to the user's personal music preferences.



DRC MP Provided



#### **FIR FILTERS**

bit One HD VIRTUOSO features up to 9 digital channels with crossover FIR filters. This sound processing mode, much more demanding in terms of calculation resources, ensures a **leading-edge in-car** listening experience.



bit One HD FIR























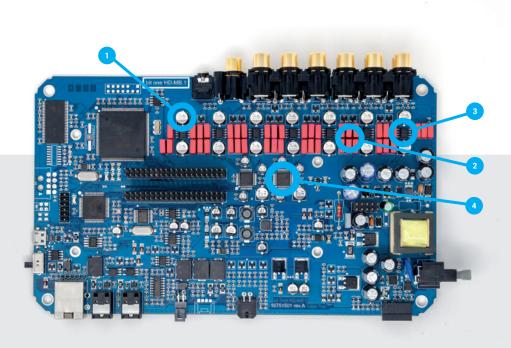


When you use the bit Tune "Auto EQ and TA" feature, the Virtuoso uses a combination of delay and FIR phase adjustment to automatically create an acoustic response that's as close as we can get to sitting in the sweet spot in a home listening environment. This sort of FIR digital correction is only available in implementations designed for home systems, but the Percept algorithm used in Virtuoso has been intended for car audio from its initial conception. It's the only one of its kind!



Parametric equalizers have long since replaced the graphic ones for their greater precision of intervention as well as a considerable decrease in phase alterations. Thanks to the processing power the bit One HD Virtuoso provides the user with three parametric equalizers that intervene in different points of the sound processing path.







The use of these high rated components contributes to obtaining more musical medium-high frequencies and a powerful and fast low range when the analog outputs of the bit One HD Virtuoso are used.

- 1. SILMIC series ELNA capacitors specific for audio use, with cellulose dielectric treated with silk fiber to mitigate the mechanical energy that comes from the bit One HD vibrations, a common condition for in-car use. The result is a superior acoustic performance.
- 2. WIMA high performance Metallized Polypropylene film capacitors featuring extremely low dissipation factor and dielectric absorption, to ensure extra clean and dynamic high-frequency reproduction.
- 3. High-Performance Burr Brown OP Amps OPAx134 SoundPlus™ series specific for absolute level audio applications, characterized by very low distortion / noise and a high response rate without saturation, features that increase the dynamic range and listening realism.
- 4. Cirrus-Logic CS4365 6-channel and CS4385 8-channel 24 bit / 192 kHz DA converters with 114 dB signal-to-noise ratio and the possibility to choose between two slow / fast digital filter responses to customize the listening experience at best.



#### **AUDIO PROCESSOR**

4 IN / 5 OUT





bit Ten is a multi-function digital processor featuring analog input, capable of transforming ordinary OEM or after-market system into a high-performance system. Provided with a 32 bit, 147 MHz clock speed DSP as well as 24 bit A/D and D/A converters, bit Ten is controlled by a software especially developed for signal treatment according to the vehicle acoustic peculiarities.



bit Ten features USS technology (Universal Speakers Simulator) to be connected to head-units featuring the "speaker load detection" circuit that would otherwise mute the audio signal output.



#### DE-EQ SET

This feature allows the de-equalization of the standard source without the need to connect the processor to the PC.







**DRC MP**Optional



#### **PC SOFTWARE**

The user friendly PC software simplifies the settings for signal processing, ensuring **great results** with little time. Using the wizard, in just a few clicks you can map the inputs and outputs and de-equalize the signal from the OEM source.

### **INTERFACE**



bit DMI is a digital interface for MOST-25 systems, providing the ability to connect the bit processors and the Audison amplifiers, equipped with digital inputs, to OEM multimedia systems in cars featuring the MOST technology based on optical fibre. Thanks to the digital connection, the signal can be transmitted without loss of quality, allowing the use of the OEM head unit audio controls.

Compatible with Forza bit, bit One HD Virtuoso





#### **ACCESSORIES**

The C2O interface converts the signals coming from the coaxial digital input and from the analog AUX-IN into a TOSLINK optical digital output signal (up to 24 bit/192kHz). The conversion allows the integration of the new Hi-Res portable devices equipped with coaxial digital output  $(75\Omega)$  and smartphones with analog output on 3.5 mm mini-Jack (also 4 poles) with Audison processors featuring an optical digital input compatible with the resolution of the signal sent to the C2O.

Compatible with Forza bit, bit One HD Virtuoso





According to the definition of Hi-Res audio provided by JAS (Japan Audio Society - jas-audio.or.jp), C2O achieves the 24 bit / 96 kHz digital to analog conversion processing requirement.

### **ACCESSORIES**

Stereo passive mixer (unpowered) featuring 4 input channels and 2 output channels, designed for active OEM multi-way systems where each speaker is powered by one specific amplified channel. SPM4 mixes audio through 4 transformers specifically developed to achieve very low distortion and highly linear acoustic response.

For all models

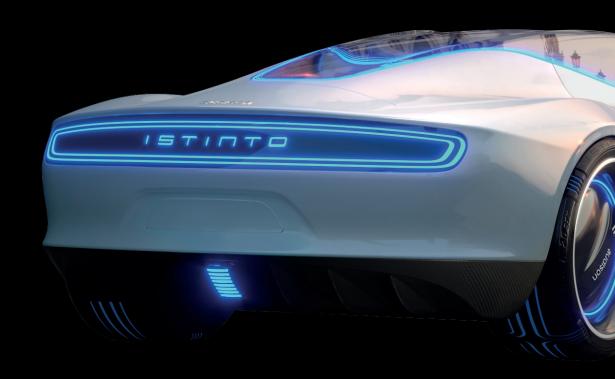




### Voce

The precious synergy between Voce amplifiers and Full DA HD technology takes the in-car listening experience to a new level of excellence; the synthesis of a unique know-how employed in mobile audio reproduction.

# THE AUTHENTIC VOICE





Voce on Audison website



Pure digital signal transfer with a resolution up to 24 bit / 96 kHz



According to the definition of Hi-Res audio provided by the Japan Audio Society, AV5.1k HD exceeds the 24 bit/96 kHz digital to analog conversion processing requirement, providing an astonishing 24 bit/ 192 kHz



Maximum versatility thanks to the bridging option for each pair of channels





#### **AV 5.1K HD**

5 CH: 75 W X 2 (4 $\Omega$ ) + 250 W X 2 (2 $\Omega$ ) + 1000 W X 1 (2Ω)

AV 5.1k HD provides the ability to create a Full DA HD chain ensuring maximum reduction of any signal deterioration, preserving the purity of Hi-Res audio files.



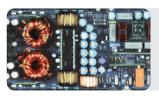






#### audison





#### MODULAR CONSTRUCTION

The modular design ensures that the power supply motherboard does not interfere with the delicate audio signal, providing noise-free amplification. The removable input/crossover section allows for an easy insertion of the AV bit IN digital module.



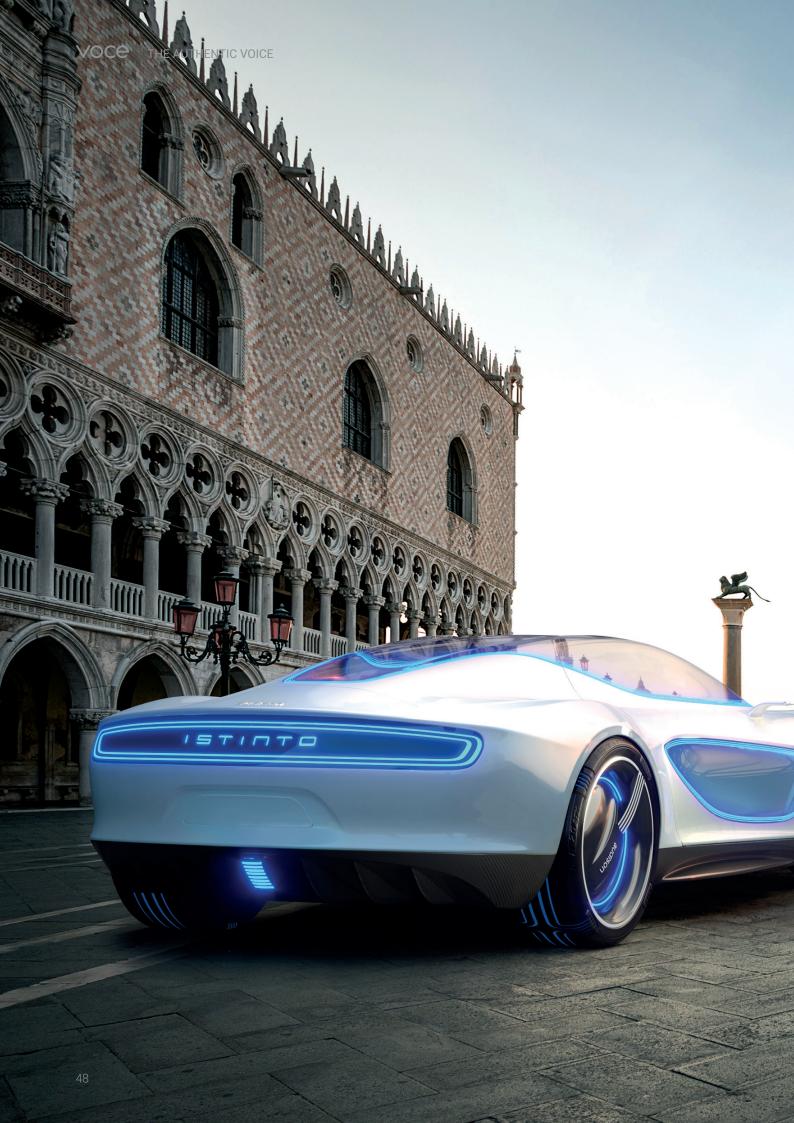
#### **DOUBLE TRANSFORMERS**

The power supply stage features dual multiple-winding transformers to increase the efficiency and power delivery in any difficult load condition.



#### A + AB + D CLASS TECHNOLOGY

AV5.1k HD and AV5.1k use three different classes of amplification, A, AB and D in one single chassis. A Class for linearity and detail; AB Class for accuracy and high power; D Class for enhanced power efficiency.





#### **AV 5.1K**

5 CH: 75 W X 2 ( $4\Omega$ ) + 250 W X 2 ( $2\Omega$ ) + 1000 W X 1 ( $2\Omega$ )





AV bit IN HD - Optional Allows for every AV amplifier to be part of a Full DA HD system, for a Hi-Res digital connection with bit processors.

### **AMP**





AV due and AV quattro are AB Class audiophile amplifiers at the service of pure sound.



### **AMP**

#### **AV UNO**

1 CH: 1700 W (2Ω)

AV uno mono amplifier features an innovative circuitry called POD (Power On Demand) that combines the purity of the AB Class with the efficiency of the D Class amplifiers.







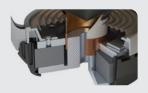
**VCRA**VOLUME CONTROL (optional)

When you drive the subwoofer in mono, for all AV models, you can use the VCRA Analog Remote Volume Control by connecting it to the special SUB VOL socket.

AV K6 250 W







#### CCAW VOICE COIL Extremely lightweight and compact, the Copper Clad Aluminium Wire voice coil provides very high efficiency and optimal thermal dissipation.



Included: AV 3.0, AV K6 Optional: AV 6.5, AV X6.5





#### **EXCLUSIVE MATERIALS**

Voce speakers cones are made of cotton fiber pressed paper featuring a Light Damping treatment, a new material specifically developed to provide a natural and linear sound performance. The tweeters domes are made of TETOLON, a combination of silk and cotton with proprietary damping treatment, providing low mass and resonance-free response up to ultrasonic frequencies.

### COMP



AV 1.1 TWEETER 180 W





AV 3.0 MIDRANGE 100 W





AV 6.5 WOOFER 200 W





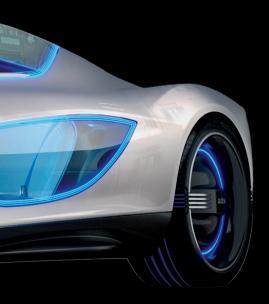






A sophisticated design distinguishes the SR amplifiers, a complete line that ranges from 5 channels to monophonic, all featuring the use of the most advanced D Class technology, for exceptional audio performance within compact dimensions.

### **HIGH POWER IN COMPACT** SIZE



Voce on Audison website









### **AMP**

SR 6.600

6 CH: 200 W X 6 (2Ω)







The filter section, complete and accessible from above, facilitates the work of the specialist during the calibration phase.

After numerous listening tests in a double-blind configuration on a significant sample of professionals and enthusiasts, the R&D team decided to adopt a new D-class technology called ADT (Audison D-Class Technology) for the whole range, which made it possible to reduce the size of the amplifiers considerably, totally preserving the audio performance that characterize each Audison project.



### **AMP**







Thanks to the integration of the USS technology (Universal Speakers Simulator), the new SR amplifiers can also be connected to head-units featuring the "speaker load detection" circuit that would otherwise mute the audio signal output.













#### **EDGELESS DESIGN**

As for the electronics design, the Audison style center has taken care of every aesthetic and functional detail, obtaining a compact amplifier made of extruded aluminium with rounded corners that ease the installation of the product in narrow spaces. Thanks to the generous heat sinks on the two short sides of the amplifiers, internal cooling fans are not necessary, which are often cause of noise and dust accumulation.



### **AMP**

#### SR 1.500

1 CH: 200 W X 6 (2Ω)



The controls, protected by a satinfinished aluminium panel, are located on the top panel of the amplifier, so that they can be easily reached from above, even after the product has been installed. When the system includes an Audison bit processor, the filter section can be totally excluded.





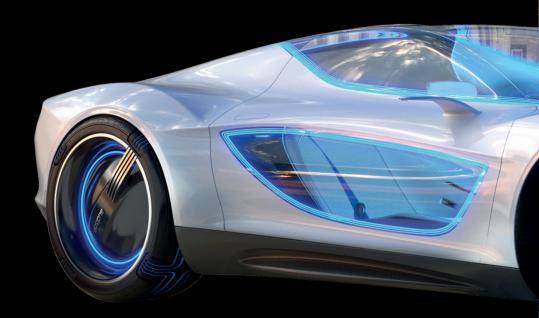


The controls, protected by a satin-finished aluminium panel, are located on the top panel of the amplifier, so that they can be easily reached from above, even after the product has been installed. When the system includes an Audison bit processor, the filter section can be totally excluded.

### Prima

Audison Prima was designed to meet the interest of the enthusiasts who like to appreciate all the nuances of the musical message with components that are perfectly integrated in the car OEM system, preserving the most precious requirement of OEM integration: space.

## THE OEM INTEGRATOR



Prima on Audison website











#### **APK 165P** 345 W



The new Prima APK 165P two-way loudspeaker system, capable of handling up to 345 W peak, is the ideal combination to fully exploit the power of the AP F8.9 bit or all other Prima amplifiers used in high power configurations.





AIF technology, to support OEM integration, provides the specialist with three different types of faceplates:

- 1. OEM, for an easy and correct factory placement
- Mesh grille: to obtain the best compromise between protection and performance with a-pillar installations
- 3. Spoke grille: for maximum acoustic performance with a-pillar installations







Thanks to the AIF, the AP 1P tweeter expresses its full potential in every application scenario. It is supplied with three mounting accessories that make the AP 1P install a breeze:

- 1. Watch band
- 2. Double-angle cup
- 3. Flush Mounting Ring

Exhaustive research combined with long listening sessions brought Prima speakers system to a level of performance never achieved before in the OEM Integration scenario.







#### **APCX P 2T, APCX P 2W CROSSOVERS**

To minimize the overall dimensions and simplify the cables routing, thus facilitating the installer's work, the APK 165P system uses separate ultra-compact crossovers for tweeters and woofers, made with carefully selected and sized components to manage high power avoiding saturation phenomena.

#### AP 6.5P

The AP 6.5P woofer features a very wide excursion to cope with the most important dynamic peaks without any compression.

#### AP 1P

The double Neodymium tablet used in the motor provides an excellent extension in high frequency and together with the 1" CCAW voice coil ensures an outstanding dynamic response.





The APK 165  $\Omega$ 2 system was developed with  $2\Omega$  nominal impedance with the purpose of exploiting all the power made available by the AP8.9 bit amplifier.





The three-way APK 163 includes a separate crossover dedicated to each speaker, simplifying OEM speaker replacement.









The R&D team optimized the electro-acoustic parameters of the new woofers for installation in the car door, respecting all the characteristics of the Prima speakers, such as the compact size of the basket to facilitate installation.

#### **APK 690**

375 W

APK 570 and APK 690 systems are ideal for car models with doors equipped to house elliptical speakers, featuring the AP 1 tweeter with dedicated ultra-compact crossovers







### COMP

The Audison Prima speaker components feature a complete range dedicated to OEM Integration: from the AP 1 tweeter to the AP 690 woofer, many solutions have been introduced to ease the installation in OEM placements. The result of this exhausting work of research gave life to a series of speakers capable of handling noticeable power combined with high efficiency and a balanced timbre.



AP 1 TWEETER 150 W





AP 4 **MIDRANGE** 120 W





AP 5 WOOFER 150 W





**AP 1P TWEETER** 150 W





AP 2 MW **WIDERANGE** 50 W



Prima AP 2 wide range reproduces the entire range of mid and high frequencies and is perfect for cars of the GM, Ford and Toyota group with 50 mm (2 in.) OEM placements in the dashboard or A-pillar, where it is combined with an elliptical woofer in the car door. The advantage of emitting the entire spectrum of frequencies by itself, responsible for creating the virtual stage with absolute phase coherence, ensures a wide acoustic scene concentrated in the upper side of the dashboard. The very low distortion and the lack of crossover point in the mid-high range also provides a natural and pleasant listening experience.

### WOOFER



The AP 6.5  $\Omega 2$  woofer has been developed with  $2\Omega$ nominal impedance with the purpose of exploiting all the power made available by the AP8.9 bit amplifier capable of 65W into a  $2\Omega$  load.







AP 690 is the perfect solution for car models with doors equipped to house elliptical speakers.

### COAX

Prima coaxials are provided with an acoustic lens specifically designed to ensure an extremely linear frequency response, also off-axis, typical of in-door installations.







APX 4 MIDRANGE 120 W

APX 5 **MIDRANGE** 150 W

**APX 6.5** WOOFER 210 W











CONCENTRIC COAXIAL TWEETER The concentric tweeter, integrated inside the woofer, allows for a linear phase response, for an improved in-car soundstage.





APX 690 is provided with a dedicated 40 mm horn loaded dome tweeter, that contributes to maximize efficiency up to 96dB SPL.

### SUB BOX

Prima subwoofers arose from the need to further upgrade OEM systems previously enhanced with Prima speakers and electronics; extending the low-frequency response, generating huge impact adding to the excitement of listening. Able to meet any requirements, the Prima subwoofers are available as a "Loaded Enclosure" or "Components", expanding the possibilities for specialists to create their one of a kind system.



The R&D staff have carefully summarized test results, creating three models designed to make the most of configurations made possible with the Forza amplifiers line. Reflex loaded enclosure was tuned to concentrate SPL in the lowest frequency range. The aim was to exploit the natural boost in output found in most cars below 60 Hz known as "cabin gain".

The 8-inch single 4  $\Omega$  voice-coil subwoofer has a powerful motor that maximizes efficiency in combination with Forza amplifiers. The low-resonant frequency of the subwoofer, matched to the reflex enclosure keeps excursion low within the entire audio spectrum, allowing also the use with high power Forza amplifer.

Sealed loaded enclosure provides the highest performance/ size ratio. For this purpose, an 8.5 lt. sealed enclosure with a 4+4  $\Omega$  dual voice-coil configuration was adopted to exploit the full power of Forza amplifiers.

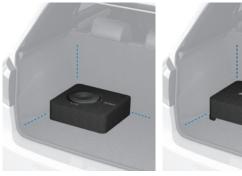






"2S2-2 Sides/2 Sounds provides the ability to choose between two physical mounting methods creating two distinct aesthetics and sound results for the Audison Prima loaded enclosures. 2 Sounds is so named thanks to the choice of Up-Firing and Down-Firing mounting options. 2 Sides satisfies the cosmetic taste of every enthusiast. The Audison R&D staff tailored performance for both operating modes, leaving the choice of the sound to the preference of the listener who can maximize perfor ance with the Audison AP bit amplifiers' powerful integrated DSP."

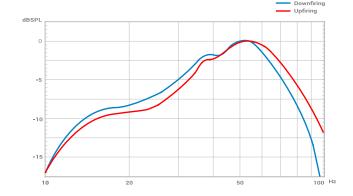
- Down-Firing: increases the lowfrequency extension for a richer sound.
- Up-Firing: more punch and definition for a highly dynamic experience.





Upfiring

Downfiring





"The enclosures SSP terminal block features both traditional push contacts and a Plug & Play connector. When using the push contacts, impedance is set to the lowest value by using the supplied bridge connector inserted into the Plug & Play terminal block (APBX 10 DS/8DS = 2  $\Omega$ , APBX 8 R=4  $\Omega$ ). The "Plug & Play" connector configures the impedance as required and provides a quick release if the enclosure needs to be removed and protects against short-circuits.





With SSP Sub-Smart Plug subwoofer installation is a breeze.

The APBX 8 DS sealed loaded enclosure provides an impressive performance/size ratio, exploiting the full power of the AP5.9 bit mono channel or with two pairs of AP8.9 bit bridged channels.





The APBX 10 DS, a 10" subwoofer loaded in a 12-litre sealed enclosure, is dedicated to the highest performing Prima systems, using the AP1 D amplifier for the sub section. The APBX 10 S4S sealed enclosure is the ideal choice to be driven by the new AP F8.9 bit using two channels bridged. Designed to house the single  $4\Omega$  voice coil, APS 10 S4S subwoofer offers an ultraperforming Plug & Play solution. The speaker's mechanical excursion of more than 18 mm ensures incredible authority, while the refined Thiele&Small parameters setup provides the ideal balance for all music genres.





#### APBX 8 R

500 W

The 8-inch single 4  $\Omega$  voice-coil subwoofer, designed for APBX 8 R reflex loaded box, maximizes efficiency in combination with the AP8.9 bit amplifier.







#### **REFLEX BOX**

The APBX 8 R loaded enclosure was developed with reflex loading, with tuning designed to concentrate output in the lowest frequency range exploiting the boost found in most cars below 60 Hz known as "cabin gain".

### **ACTIVE SUB BOX**







The Prima active subwoofers, with 8 and 10-inch drivers respectively, feature a dedicated high performance amplification module which enhances all the passive box technologies, such as the 2S2 (2 Sides / 2 Sounds) design, the Plug & Play terminal block and ultra-compact size. The controls section is complete and provides an optimal regulation of the low frequency emission in the car cabin. The Butterworth low pass filter at 12dB/Oct. with variable cut-off frequency (50-300 Hz) can be bypassed, when used with a processor with pre-out output dedicated to the sub. The adjustable bass-boost control (0 ÷ 6 dB) at 45 Hz allows the user to emphasize the response in the lower side of the spectrum. The SSP (Sub Smart Plug) terminal block is provided with a single Plug&Play connector to be able to disconnect the box easily and safely.

The remote control HRC AP included, provides the ability to adjust the output level directly from the driver's seat.



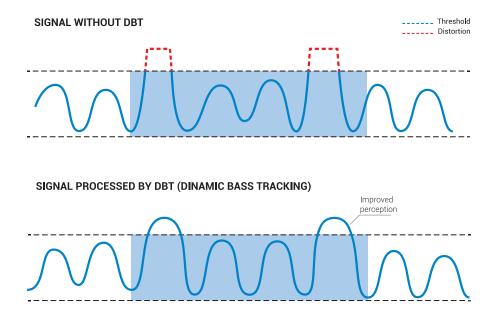




The amplification module, with power outputs of 400W RMS (APBX 10 AS2) and 250W (APBX 8 AS2) is developed with he-li technology (high efficiency / low impedance), which thanks to the absence of the DC-DC voltage booster reaches the impressive 90% efficiency level, very close to the theoretical limit of the D-Class. This feature ensures a perfect synergy with the he-li (High Efficiency Low Impedance) technology, maximizing the combination of amplifier, speakers and sealed box, to obtain low, powerful and crisp frequencies.



DBT prevents this critical condition by processing the attack and release of the peak in advance according to parameters optimized based on the perception of sound by the auditory system. The result is amazing, the perception of pressure and acoustic quality are greatly emphasized thanks to the intervention of the (DBT), which "favors" the extremely dynamic and defined reproduction of low frequencies, even at maximum power.



# **ACTIVE SUB**

Prima active subwoofers feature a built-in D Class amplifier with HE-LI (High Efficiency Low Impedance) technology, to exploit the whole SPL from their custom designed low-impedance drivers. The low-profile sealed box design has been optimized for their custom drivers that require extremely compact dimensions to perform at their peak, producing a solid bass from an enclosure that is only 6 inches (127 mm) deep. The HRC AP remote level control provided allows the control of subwoofer levels directly from the driver's seat.







audison





BUILT-IN FILTER
The built-in variable frequency low-pass filter (50-200 Hz) can be by-passed when used with AP bit amplifiers, provided with built-in DSP.



#### **BASS-BOOST**

Adjustable bass-boost control (0 ÷ 6 dB) at 45 Hz.



EASY PLUG IN/OUT
The control panel features both
Hi-Level and Low-Level inputs
with automatic turn-on to ease
the plug in/out of the box.

### SUB

Prima subwoofer components have been developed with a primary goal: to deliver high output in tight spaces. The APS 10 D and APS 8 D models are designed to deliver maximum performance in a sealed enclosure with ultra-compact volumes. Both dual voice-coil versions feature push connectors for ease of wiring and configurations.



APS 8 D 500 W - 4+4 Ω audison



#### MASSIVE MOTOR Optimized with FEM (Finite Element Modeling) for perfect control under high power and high excursion conditions.

#### NO POLE VENT

Air vents on the basket underneath the spider, eliminating the need for vents on the bottom-plate, allowing mounting close to rear wall of enclosure.



**OPTIMIZED GEOMETRY** The design of cone, dust-cap and basket guarantee large excursions of the mobile group while keeping the mounting depth to a minimum.



Grille and gasket included for all APS models

### SUB

The configuration of the single  $4\Omega$  voice coil makes APS 10 S4S ideal to be driven by the new AP F8.9 bit amplifier with two channels bridged. This setup also provides the possibility to create custom enclosures with two APS 10 S4S driven by the AP 1D amplifier using the 540 W RMS delivered on the  $2\Omega$  load resulting from the drivers connection in parallel.



**APS 10 D** 800 W - 4+4 Ω

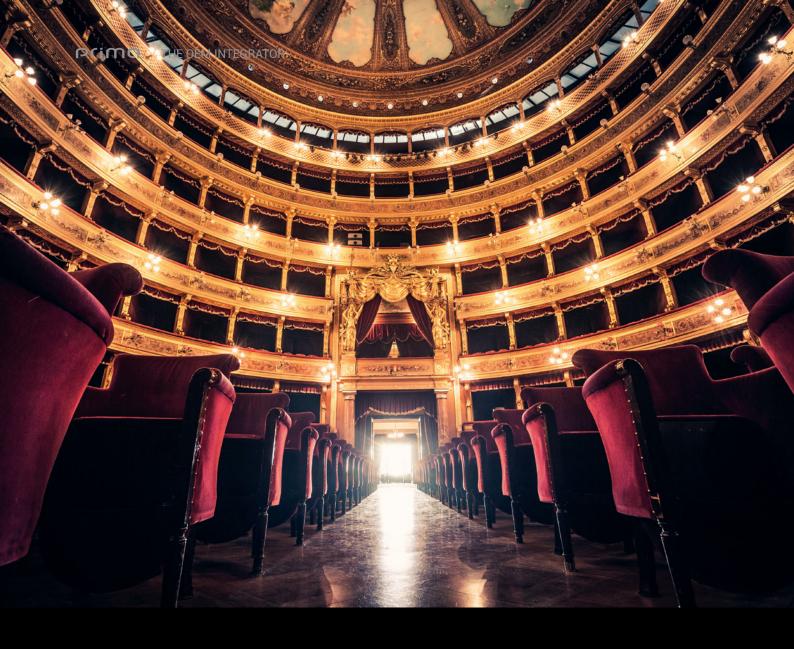
**APS 10 S4S** 800 W - 4 Ω







With the aim of providing high acoustic output even when used with lower power, the APS 8 R was designed for use in reflex enclosures.



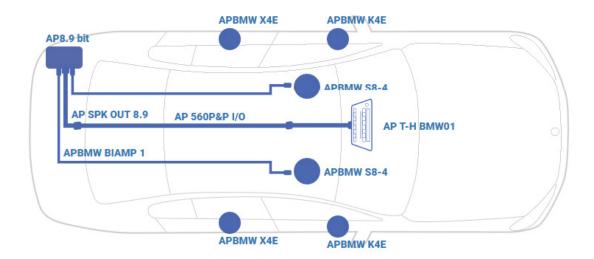
A CONCERT HALL IN YOUR CAR, WITH A PERFECTLY INTEGRATED SOLUTION.

### **BMW-MINI CUSTOM FIT**

BMW and MINI are trademarks of BMW AG (Bayerische Motoren Werke Aktiengesellschaft)

The two-way APBMW K kits for BMW and Mini create a threedimensional sound stage and give the musical message the essential timbre accuracy. Available in two basket and fixing screws options, K4E and K4M according to the model, the kit is provided with all BMW and Mini custom installation accessories.





Audison has engineered a system of BMW custom fit speakers – a 200 mm shallow-frame under seat woofer, 100 mm midranges with 3-post aluminum cast frames, and Tetelon textile-dome tweeters. The midrange and coaxials are available in both 3-post frame sizes used by BMW and MINI. Connection is plug-and-play. The under-seat woofers are available in both  $2\Omega$  and  $4\Omega$  values, while the other speakers are  $4\Omega$ .



#### **NEODYMIUM MAGNETIC GROUPS**

All Prima Sound Pack speakers for BMW and Mini have been developed with Neodymium Magnetic groups to maximize performance with minimal bulk and weights, core elements of the OEM upgrade.



#### **DIE-CAST ALUMINIUM BASKET**

These design choices minimize the influence of mechanical structure and installation on sound.



#### **DIRECT REPLACEMENT SUBWOOFER**

The 200 mm (8") APBMW S subwoofers allow a "direct replacement" of the OEM speakers underneath the front seats, making the most of the factory acoustic load and generating deep and crisp low frequencies.



The speakers can be used as replacements with OEM amplification, but the best results are attained when used in a system upgrade that includes Audison Forza bit DSP amplifiers and BMW integration harnesses.

## 2 WAY SYSTEM

Tweeter: Audison R&D used a Tetolon silk/Cotton blend for light weight and improved damping, and this tweeter has the largest dome of any BMW replacement tweeter - while still snapping into the same mount as the OEM tweeter. The Audison 29mm dome has 34% more surface area than a 25 mm dome, which means more output, a lower resonant frequency, and greater low-frequency extension. Most BMW replacement tweeters have 25mm domes - only Audison offers this improved performance.







# COAX





The 100 mm (4") APBMW X coaxials, available in the X4E - X4M options, have been designed for BMW-MINI models that do not allow the installation of a two-way system on the front or for the upgrade of the rear system.

#### **APBMW A4E**





The under-seat woofer is available in 2 and 4 ohms – if we are bridging 2 channels into it, we have more power available. The 4-ohm woofer is best used with bridged channels of an 8-channel bit amplifier, and in this mode the lowest bass extension is achieved. The 2-ohm model is perfect for this midbass application

## UNDER SEAT WOOFER



**APBMW S8-2.2** 300 W - 2 Ω



**APBMW S8-4.2** 300 W - 4 Ω



### bit

	Analog inputs (high levels / pre in)
	Analog low-level stereo auxiliary input
	USS technology
Audio Inputs	Optical digital input
	Electric coaxial digital input
	High-level momentary audio interrupt input with system turn on capability (with Phone Mute IN) for use with mobile phone or navigation systems
Audio Outputs	Independent analog PRE channels featuring adjustable level
auto outputs	Independent digital audio channels through AD Link output (CAT5 STP LAN cable for use with AD Link provided amplifiers)
	USB /B (3.0 / micro USB 2.0 only for bit One HD Virtuoso) connector for PC connection
	AC Link control bus connectors for DRC / DRC MP / DRC AB and provided amplifiers
put/Output Controls	Remote In/Key mem
	Remote out with fixed delay or adjustable by PC
	Mute In and Phone Mute controls settable by PC to switch the audio inputs to auxiliary inputs with turn on capability
	Automatic De-Equalization
	Automatic Delay-Compensation
	All Pass Compensation
	Polarity check
EM Integration features	Full range stereo signal derived through automatic routing high level input channels
	Pass-Through configuration
	Auto tune with Audison bit Tune
	Guided procedure that, thanks to a wide range of set names, provides the ability to assign each speakers channel to the bit processor connections and automatically coordinate their functioning
	Reference tone/signal for sensitivity adjusting
/Out Volume	Main input sensitivity adjustement
	Independent level control for each output channel for system fine tuning
	Dynamic equalizer: self-adjusting gain between low and high listening levels
	Bass Boost
	Automatic de-equalization (with supplied Test CD *- DVD - Audio files)
qualizer	Equalizers for each auxiliary inputs
	Independent graphic equalizers for each output channels with IIR FILTERS
	Independent graphic equalizers for each output channels with FIR FILTERS
	MAIN EQ
	Filter typology: Hi-pass, Lo-pass, Full Range, Band-pass
	Cut-off frequency steps
	Filter mode and Cut-off slope
rossover Filter	Bandpass filter with asymmetrical slope setting
	Alignments
	Mute: Selectable for each output (On/Off)
	Phase: Selectable for each output (0°/180°)
	Guided procedure for the speaker distance data entry with an automated calculation of proper delay times for each channel for
me Alignment	accurate time alignment set-up
	Delay
	Digital Remote Control (DRC/DRC MP/ DRC AB) supplied with product
	Master Volume control, Subwoofer Volume control, Balance control, Fader control; Input selection; memory selection
RC / DRC MP / DRC AB	Bass Boost control
	Dynamic Equalizer On/Off
lomory	Available presets separately managed and recalled by the DRC/DRC MP/DRC AB Remote Control
lemory	
it software	Microsoft Windows (XP, Vista, 7, 8, 10, 11) based software with "Standard" and "Expert" operating modes; minimum screen resolution: 1024 x 600 px

### audison

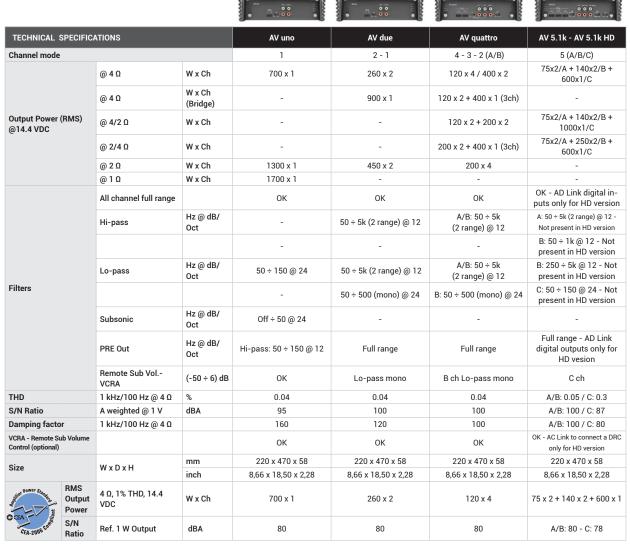




bit One HD Virtuoso	bit Ten				
12 high lev. + 6 pre in	4 high lev. + 4 pre in				
1	1				
√	√				
2	-				
-	-				
-	1				
13	5				
13	-				
√	√				
√	√				
√	√				
adj.	adj.				
-	√				
√	√				
√	-				
√	-				
√	-				
√	√				
√	-				
√	√				
√	√				
USB Dongle	CD				
automatic with PC	manual				
-40 ÷ 0 dB	-40 ÷ 0 dB				
√	-				
"Adjustable parametric pole (±12 dB; 10 ÷ 500 Hz)"	-				
with 'time delay compensation'	√				
"Parametrics Equalizer: +12 dB ÷ -15 dB; 10 poles FIR type"	-				
N.13 Parametrics Equalizers: +12 dB ÷ -15 dB; 13 poles	31 band (1/3 oct; +/-12dB)				
N.13 Parametrics Equalizers: +12 dB $\div$ -15 dB; 9 poles FIR type +3 poles IIR type	-				
"Parametric Equalizer: +12 dB ÷ -15 dB; 5 poles FIR type + 1 pole IIR type"	-				
√	√				
70 (10 Hz to 20 kHz) + direct numeric frequency input	68 (20 Hz to 20 kHz)				
FIR / Linkwitz -Butterworth -Bessel 6 to 48 dB/Oct.	Linkwitz -Butterworth 6 to 24 dB/Oct.				
√	√				
√	√				
√ √	√				
٧	Y				
<b>√</b>	√ 2.17				
0 ÷ 22 ms	0 ÷ 15 ms				
√ (DRC MP)	Optional (DRC / DRC MP/ DRC AB)				
√	√				
√ √	-				
	-				
8 (DRC MP)	2				
√	✓				

91

#### voce















TECHNICAL :	SPECIFICATIONS	AV 1.1	AV 3.0	AV 6.5	AV X6.5	AV K6
Туре		Tweeter	Midrange	Woofer	Coaxial	2 way system
	Tweeter mm (in.)	28 (1.1)	-	-	25 (1)	28 (1.1)
Size	Midrange mm (in.)		70 (3)	-	-	-
	Woofer mm (in.)	-	-	165 (6.5)	165 (6.5)	165 (6.5)
Power handling W	peak	180 Hi-pass filtered 2.0 kHz @ 12 dB/Oct.	100 Hi-pass filtered 250 Hz @ 12 dB/Oct.	200	200	250
nandling w	continuos -		-	100	100	125
Impedance	Ω	4	4	4	4	4
Freq. Response	Hz	1.2k ÷ 22k	200 ÷ 14k	50 ÷ 7k	50 ÷ 22k	50 ÷ 22k
Sensitivity	dB/Spl	92	93	91	91	91
	Tweeter	Neodymium REN	Neodymium REN	-	Neodymium REN	Neodymium REN
Magnet	Midrange/Woofer	-	-	High density flux ferrite	High density flux ferrite	High density flux ferrite
	Tweeter	Tetolon fibre	-	-	Tetolon fibre	Tetolon fibre
Dome/cone	Midrange/Woofer	-	Cotton fibre pressed paper with light damping treatment	Cotton fibre pressed paper with light damping treatment	Cotton fibre pressed paper with light damping treatment	Cotton fibre pressed paper with light damping treatment
Grille		Included	Included	Optional	Optional	Included

### FORZA











TECHNICA	AL SPECIFIC	ATIONS		AF M12.14 bit	AF M8.14 bit	AF C8.14 bit	AF M5.11 bit	AF C4.10 bit					
Channel m	ode			12 - 6	8 - 4	8 - 4	5	4					
Output Pov	wer (RMS)	@ 4 Ω	W x Ch	60 x 12 / 180 x 6 (Bridge)	90 x 8 / 280 x 4 (Bridge)	65 x 8 / 200 x 4 (Bridge)	100 x 4 + 400 x 1	90 x 4 / 300 x 2 (Bridge)					
@14.4 VD0		@ 2 Ω	W x Ch	90 x 12	140 x 8	100 x 8	150 x 4 + 600 x 1	150 x 4					
		Filter type			Full	/ Hi Pass / Lo Pass / Band P	ass						
		Filter mode and slope	dB/Oct.	Linkwitz-Riley @ 12		5/12/18/24/30/36/42/48 - Be 2/18/24/30/36/42/48 - QLP		12/48 - Chebyshev @					
		Crossover frequency	Hz			20 ÷ 20k							
		Phase control				0° / 180°, All-Pass filters							
		Hi/Low Level Inputs	VRMS	8+	8 + 4 inputs with optional F4IN card (Sensitivity: 0.6 ÷ 6 Low - 2.2 ÷ 22 Hi) F4IN fa 3,2 - 32 V								
PRIMA DS	P	Digital Inputs		1 x Optical S/PDIF; Max 192 kHz / 24 bit + 1 x Optical/Coaxial S/PDIF with optional F2O card									
		Input Output Real Time Audio Monitor		RTA									
		Analog Input Equalizer		Automatic De-Equalization									
		Output Equalizer		Parametric/Graphic Biquad: 15 poles, 20 Hz ÷ 20 kHz									
		Time Alignment Distance	cm / in.			0 ÷ 510 cm / 0 ÷ 200.8 inches	:						
THD		1 kHz @ 4 Ω	%	0.03	0.05	0.05	0.08	0.1					
S/N Ratio I Input	Master	A weighted @ 1 V	dBA	98	98.5	98.5	98	98					
S/N Ratio I Digital Inpo		A weighted @ 1 V	dBA	105	105	105	105	105					
Damping f	actor	1 kHz @ 4 Ω		80	100	85	100	95					
DRC MP /	DRC AB			Optional	Optional	Optional	Optional	Optional					
Size		WxDxH	mm	240 x 47 x 156	240 x 47 x 156	200 x 47 x 134	240 x 47 x 156	200 x 47 x 134					
			inch	9.44 x 1.85 x 6.14	9.44 x 1.85 x 6.14	7.87 x 1,85 x 5.2	9.44 x 1.85 x 6.14	7.87 x 1,85 x 5.2					
C TA	RMS Output Power	4 Ω, 1% THD, 14.4 VDC	W x Ch	45 x 8	90 x 8	55 x 8	85 W x 4 + 340 W x 1	90 x 4					
CEA-2006 Cd.	S/N Ratio	Ref. 1 W Output	dBA	75.5	80	80	78	80					









TECHNICAL	SPECIFICATION	ONS		AF M6D	AF M4D	AF C4D	AF M1D
Channel mod	le			6 - 3	4 - 2	4 - 2	1
Output Power (RMS) @14.4 VDC		@ 4 Ω	W x Ch	135 W x 6 / 440 W x 3 (Bridge)			600
		@ 2 Ω	W x Ch	220 x 6	130 x 4	150 x 4	540
@1		@1Ω	W x Ch	-	-	-	1200
THD 1		1 kHz @ 4 Ω	%	0.04	0.05	0.03	0.03
S/N Ratio Ma	aster Input	A weighted @ 1 V	dBA	103	103	102	105
Damping fac	tor	1 kHz @ 4 Ω		160	160	95	125
Size		WxDxH	mm	240 x 47 x 156	240 x 47 x 156 198 x 45,50 x 134		240 x 47 x 156
			inch	9.44 x 1.85 x 6.14	9.44 x 1.85 x 6.14	7.8 x 1.8 x 5.27	9.44 x 1.85 x 6.14
RMS Output Power		4 Ω, 1% THD, 14.4 VDC	W x Ch	130 x 6	150 x 4	90 x 4	600
CEA-2006 Co	S/N Ratio	Ref. 1 W Output	dBA	80	80	81	81

#### Prima

PRIMA SPEAKERS	OTOTEW .							
		APK 130	APK 165	ΑΡΚ 165 Ω2	APK 165P	APK 163	APK 570	APK 690
Туре		2 way system	2 way system	2 way system	2 way system	3 way system	2 way system	2 way systen
	Tweeter mm (in.)	26 (1)	26 (1)	26 (1)	29 (1.14)	26 (1)	26 (1)	26 (1)
Size	Midrange mm (in.)	-	-	-	-	100 (4)	-	-
	Woofer mm (in.)	130 (5)	165 (6.5)	165 (6.5)	165 (6.5)	165 (6.5)	5 x 7	6 x 9
Power handling W	peak	225	300	300	345	375	300	300
Power nandling w	continuos	75	100	100	115	125	100	100
Impedance	Ω	4	4	2	4	4	4	4
Freq. Response	Hz	70 ÷ 20k	60 ÷ 20k	50 ÷ 20k	50 ÷ 24k	50 ÷ 20k	55 - 20 k	40 - 20 k
Sensitivity	dB/Spl	93	93,5	95	92,5	93,5	93,5	93,5
	Tweeter	Neodymium REN	Neodymium REN	Neodymium REN	Neodymium REN	Neodymium REN	Neodymium REN	Neodymium REN
Magnet	Midrange/ Woofer	High density flux ferrite	High density flux ferrite					
	Tweeter	Tetolon fibre	Tetolon fibre					
Dome/cone	Midrange/ Woofer	Water-repellent treated paper cone	Water-repeller treated pape cone					
Grille		Included	Included	Included	Optional	Included	-	-





















		_									
PRIMA SPE	AKERS COMP	ONENT									
		AP 1	AP 1P	AP 2	AP 4	AP 5	AP 6.5	AP 6.5P	ΑΡ 6.5 Ω2	AP 8	AP 690
Туре		Tweeter	Tweeter	Wide range	Mid bass	Woofer	Woofer	Woofer	Woofer	Woofer	Woofer
	Tweeter mm (in.)	26 (1)	29 (1.14)	-	-	-	-	-	-	-	-
Size	Midrange mm (in.)	-	-	50 (2)	100 (4)	-	-	-	-	-	-
	Woofer mm (in.)	-	-	-	-	130 (5)	165 (6.5)	165 (6.5)	165 (6.5)	200 (8)	6 x 9
Power handling W	peak	150 Hi-pass filtered @3,5 kHz - 12 dB Oct	150 Hi-pass filtered @3,5 kHz - 12 dB Oct	50	120	150	210	330	210	300	300
	continuos	-	-	25	40	50	70	110	70	100	100
Impedance	Ω	4	8	4	4	4	4	4	2	4	4
Freq. Response	Hz	2k ÷ 20k	1,2k ÷ 25k	150 ÷ 20k	80 ÷ 7,5k	70 ÷ 5k	60 ÷ 5k	50 ÷ 5k	60 ÷ 5k	35 ÷ 3k	35 ÷ 5k
Sensitivity	dB/Spl	93	92	84	91	93	93,5	92,5	95	93,5	95
	Tweeter	Neodymium REN	Neodymium REN	-	-	-	-	-	-	-	-
Magnet	Midrange/ Woofer	-	-	Neodymium REN	High density flux ferrite						
	Tweeter	Tetolon fibre	Tetolon fibre	-		-	-	-	-	-	-
Dome/ cone	Midrange/ Woofer	-	-	Aluminium	Water-repel- lent treated paper cone						
Grille		Included	Included	-	-	-	-	-	-	-	-

### Prima











PRIMA SPEAKERS	S COAXIAL					
		APX 4	APX 5	APX 6.5	APX 570	APX 690
Туре		2 way coaxial	2 way coaxial	2 way coaxial	2 way coaxial	3 way coaxial
	Tweeter mm (in.)	24 (0.9)	24 (0.9)	24 (0.9)	24 (0.9)	Supertweeter - 15 (0.6)
Size	Midrange mm (in.)	-	-	-	-	Tweeter - 40 (1.58)
	Woofer mm (in.)	100 (4)	130 (5)	165 (6.5)	5 x 7	6 x 9
Power handling	peak	120	150	210	210	300
w	continuos	40	50	70	70	100
Impedance	Ω	4	4	4	4	4
Freq. Response	Hz	80 ÷ 23k	70 ÷ 23k	60 ÷ 23k	60 ÷ 23k	40 ÷ 20k
Sensitivity	dB/Spl	91	93	94	94	96
M	Tweeter	Neodymium REN				
Magnet	Midrange/Woofer	High density flux ferrite				
	Tweeter	Tetolon fibre				
Dome/cone	Midrange/Woofer	Water-repellent treated paper cone				
Grille		-	-	-	-	Included









PRIMA SUBWOOF	ER				
		APS 8 R	APS 8 D	APS 10 D	APS 10 S4S
Туре		Subwoofer component	Subwoofer component	Subwoofer component	Subwoofer component
Speaker size	mm (in.)	200 (8)	200 (8)	250 (10)	250 (10)
Box size	mm (in.)	-	-	-	-
Power handling	peak	500	500	800	800
W	continuos	250	250	400	400
Impedance	Ω	4	4 + 4	4 + 4	4
Sensitivity	dB/Spl	84	83,5	84	83,5
Magnet		High density flux ferrite			
	Midrange/Woofer	Cotton-Fibre pressed paper	Cotton-Fibre pressed paper	Cotton-Fibre pressed paper	Cotton-Fibre pressed paper
Grille		Included	Included	Included	Included

#### Prima













PRIMA SUBWOOF	ER						
		APBX 8 R	APBX 8 DS	APBX 10 DS	APBX 10 S4S	APBX 8 AS2	APBX 10 AS2
Туре		Relex sub box	Sealed sub box	Sealed sub box	Sealed sub box	Active sub box	Active sub box
Speaker size	mm (in.)	200 (8)	200 (8)	250 (10)	250 (10)	200 (8)	250 (10)
Box size	mm (in.)	473 (18.62) x 334 (13.15) x 109 (4.29)	377 (14.84) x 334 (13.15)x 109 (4.29)	472 (18.58) x 334 (13.15) x 120 (4.72)	472 (18.58) x 334 (13.15) x 120 (4.72)	386 (15.2) x 158 (6.22) x 298 (11.73)	460 (18.11) x 158 (6.22) x 338 (13.31)
Power handling W	peak	500	500	800	800	500	800
	continuos	250	250	400	400	250	400
Impedance	Ω	4	4 + 4	4 + 4	4	0,4	0,16
Sensitivity	dB/Spl	-	-	-	-	-	-
Magnet		High density flux ferrite	High density flux ferrite	High density flux ferrite	High density flux ferrite	High density flux ferrite	High density flux ferrite
	Midrange/ Woofer	Cotton-Fibre pres- sed paper	Cotton-Fibre pres- sed paper	Cotton-Fibre pres- sed paper	Cotton-Fibre pres- sed paper	Cotton-Fibre pres- sed paper	Cotton-Fibre pres- sed paper
Grille		Included	Included	Included	Included	Included	Included













PRIMA SPEAKER F	OR BMW & MINI						
		APBMW X4M	APBMW X4E	APBMW K4E	APBMW K4M	APBMW S8-2	APBMW S8-4
Туре		Coaxial	Coaxial	2 way system	2 way system	Woofer	Woofer
	Tweeter mm (in.)	24 (0.9)	24 (0.9)	29 (1.1)	26 (1)	-	-
Size	Mid-range mm (in.)	100 (4)	100 (4)	100 (4)	165 (6.5)	-	-
	Woofer mm (in.)	-	-	-	-	200 (8)	200 (8)
Power handling	peak	80	80	100	100	300	300
W	continuos	40	40	50	50	150	150
Impedance	Ω	4	4	4	4	2	4
Freq. Response	Hz	100 ÷ 22k	100 ÷ 22k	90 ÷ 23k	60 ÷ 20k	40 ÷ 500	40 ÷ 500
Sensitivity	dB/Spl	88	88	89	88	91	88
	Tweeter	Neodymium REN	Neodymium REN	Neodymium REN	Neodymium REN	-	-
Magnet	Mid-range	Neodymium REN	Neodymium REN	Neodymium REN	Neodymium REN	-	-
	Woofer	-	-	-	-	Neodymium REN	Neodymium REN
	Tweeter	Tetolon fibre	Tetolon fibre	Tetolon fibre	Tetolon fibre	-	-
Dome/cone	Midrange/ Woofer	Cotton-Fibre pressed paper					

### **SR**











TECHNICAL	SPECIFICA	ATIONS		SR 1.500	SR 4.300	SR 4.500	SR 5.600	SR 6.600
Channel mo	de			1	4 - 3 - 2	4 - 3 - 2	5 - 3	6 - 5 - 4 - 3
		@ 4 Ω	W x Ch	500 x 1	85 x 4 / 250 x 2	130 x 4 / 450 x 2	-	85 x 4 + 110 x 2
		@ 4 Ω	W x Ch (Bridge)	-	80 x 2 + 250 x 1	120 x 2 + 480 x 1	75 x 4 + 330 x 1 / 230 x 2 + 310 x 1	300 x 2 + 380 x 1
Output Pow	er (RMS)	@ 4/2 Ω	W x Ch	-	-	-	115 x 4 + 550 / 230 x 2 + 550 x 1	275 x 2 + 640 x1
		@ 2/4 Ω	W x Ch	-	130 x 2 + 260 x 1	220 x 2 + 440 x 1	-	-
		@ 2 Ω	W x Ch	800 x 1	130 x 4	220 x 4	-	150 x 4 + 190 x 2
		@1Ω	W x Ch	1000 x 1	-	-	-	-
		All channel full range		-	ОК	ОК	4 CH	6CH
		Hi-pass	Hz @ dB/ Oct	-	A CH: 50 ÷ 3.2k @ 12	A CH: 50 ÷ 3.2k @ 12	A CH: 50 ÷ 500 @ 12 (x1) A CH: 500 ÷ 5k @ 12 (x10)	A CH: 50 ÷ 500 @ 12 (x1) A CH: 500 ÷ 5k @ 12 (x10)
				-	B CH: 50 ÷ 3.2k @ 12	B CH: 50 ÷ 3.2k @ 12	B CH: 50 ÷ 500 @ 12	B CH: 50 ÷ 700 @
				-	-	-	-	C CH: 50 ÷ 700 @ 1
Filters		Band-pass	Hz @ dB/ Oct	-	-	-	B CH: 50 ÷ 500 (Hi) @ 12 - 50 ÷ 500 kHz (Lo: x1) @ 12 B CH: 50 ÷ 500 (Hi) @ 12 - 500 ÷ 5 kHz (Lo; x10) @ 12	B CH: 50 ÷ 700 (Hi) @ 12 - 50 ÷ 500 kH: (Lo: x1) @ 12 B CH: 50 ÷ 700 (Hi) @ 12 - 500 ÷ 5 kHz (Lo; x10) @ 12
		Lo-pass	Hz @ dB/ Oct	50 ÷ 250 @ 24	A CH: 50 ÷ 3.2k @ 12	A CH: 50 ÷ 3.2k @ 12	C CH: 50 ÷ 500 @ 24	B CH: 50 ÷ 700 @ 1
				-	B CH: 50 ÷ 3.2k @ 12	B CH: 50 ÷ 3.2k @ 12	-	C CH: 50 ÷ 700 @ 1
		Bass Boost	Hz @ dB		B CH: 50 (0 ÷12)	B CH: 50 (0 ÷12)	C CH: 50 (0 ÷ 12)	-
		Subsonic	Hz @ dB/ Oct	On/Off 25 Hz @ 24	-	-	-	-
		PRE Out	Hz @ dB/ Oct	Hi-pass: 50 ÷ 250 @ 12	Full range	Full range	-	-
		Remote Sub Vol VCR-S1	(-20 ÷ 6) dB	ОК	-	-	ОК	ОК
THD		100 Hz @ 4 Ω	%	0.1	0.03	0.08	0.02	0.02
S/N Ratio		A weighted @ 1 V	dBA	100	100	105	105	105
Damping fac	ctor	100 Hz @ 4 Ω		> 300	150	200	300	300
VCR-S1 - Re Sub Volume				Optional	-	-	Optional	Optional
Ci		WxDxH	mm	264 x 155 x 47,5	190 x 155 x 47,5	264 x 155 x 47,5	294 x 155 x 47,5	314 x 155 x 47,5
Size			inch	10.39 x 6.10 x 1.87	7.48 x 6.10 x 1.87	10.39 x 6.10 x 1.87	11.57x 6.10 x 1.87	12.36 x 6.10 x 1.8
Aller Power States	RMS Output Power	4 Ω, 1% THD, 14.4 VDC	W x Ch	500 x 1	75 x 4	125 x 4	75 x 4 + 300 x 1	77 x 4 + 87 x 2
CEA-2006 Faring	S/N Ratio	Ref. 1 W Output	dBA	75	82	83	75 W: 84 dBA – 300 W: 75 dBA	84dBA





# ELETTROMEDIA, EVOLUTION OF TECHNOLOGY AND ART OF SOUND

FOUNDED IN 1987, ELETTROMEDIA IS NOWADAYS THE WORLD LEADER IN THE MOBILE AND MARINE AUDIO MARKET FOR THE MANUFACTURING OF AMPLIFIERS, LOUDSPEAKERS AND DIGITAL SOUND PROCESSOR.

#### **LOUDSPEAKER DESIGN SUITE**

In order to increase efficiency and accuracy in the design validation process, our R&D team developed four proprietary FEM applications within COMSOL® Multiphysics Modeling Software for simulating specific aspects of loudspeaker design; Lumped Parameters, Electromagnetic, Suspension and Vibroacoustic.

This software includes a tailored graphical user interface which can realise unlimited virtual prototypes at the same time, and all within 5% of a physical prototype. Adopted daily by our engineers, this cutting-edge Design Suite optimises the lead-time from receipt of a customized project to supplying approved physical samples, so our customers can plan their own project development schedule with confidence.

Born in Potenza Picena by a group of friends who shared the same passion for in-car high fidelity, throughout the past years Elettromedia has been walking the path of excellence: its products are distributed in more than 60 countries; the company has received many awards and acknowledgements from the most authoritative leaders within the car audio industry; it also boasts reviews of more than 4000 pages published in 30 different languages

The Elettromedia brands are Audison, Hertz and Connection. Through a co-branding strategy, the company offers all of the components required for a complete, top-level audio system. In 2008, Elettromedia founded Lavoce Italiana a company specialized in loudspeaker design and production for the professional audio industry.

At our state-of-the art R&D center in Potenza Picena, Italy, our experienced and Ph.D. infused Research Department and R&D team are focused on innovation in every aspect, continuously looking to push the boundaries of sound quality, product reliability and consistency of electro- acoustic performance, whilst ensuring each and every product has that distinct cost-effective edge and design elegance synonymous with Elettromedia.



# THESIS

# BEYOND THE ABSOLUTE



audison.com



