

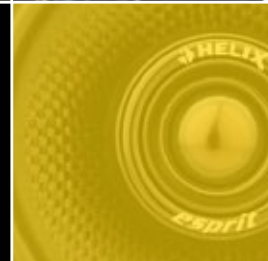


2011



German

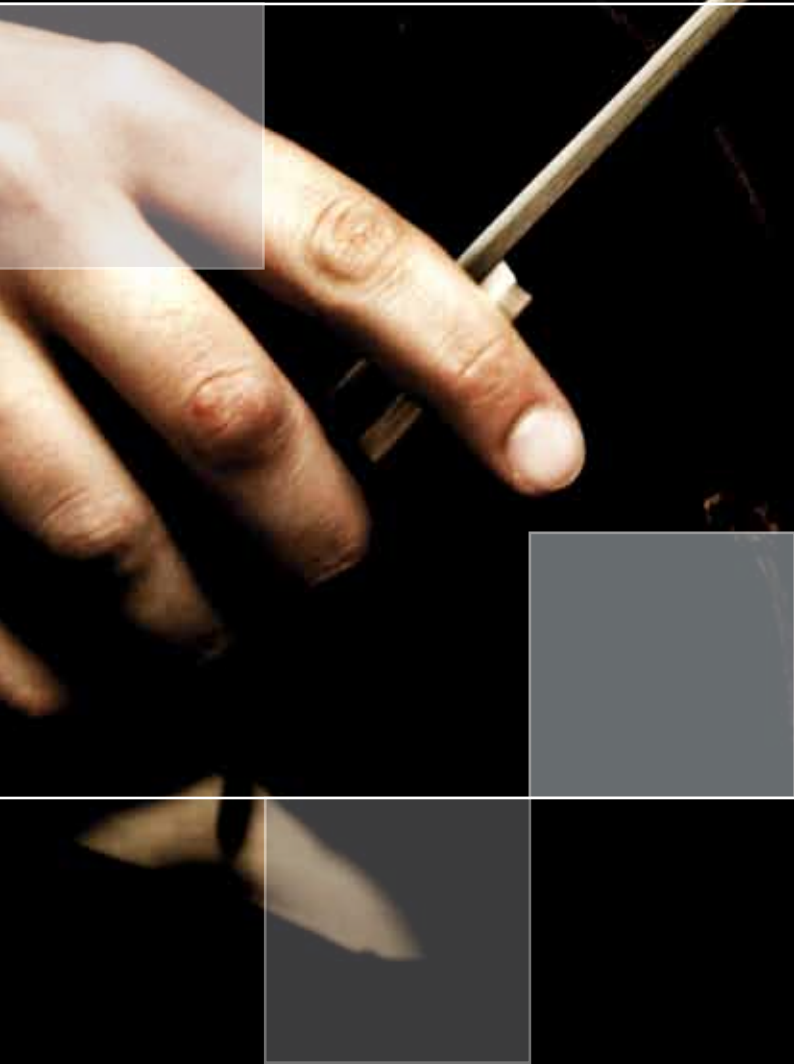
Car Audio



INTRO

"Our love of music is what motivates our work and gives us the ideas and the energy we need. It is a constant challenge that guides us to the ultimate destination: We want to create products that deliver the perfect sound experience and communicate the fascination of music with all its emotions and variations."

HEINZ FISCHER
Founder and Managing Director



For the love of pure music

With the new products in our HELIX brand, we once again raise the bar in terms of music enjoyment and impressive sound experience. With these products, we place a special focus on the original sound of the music and its elementary meaning: the joy of unadulterated, widely diversified sounds and the harmony of an utterly uncountable number of tones, timbres and compositions.

Our products satisfy the highest demands with a great value for money that the press has called sensational.

With our many years of experience in the development of home and car audio components as well as our exploration of new circuitry concepts and materials, we consistently pursue a philosophy of reproducing acoustic signals in the vehicle as authentically as possible.

To do this, we need real innovations that we consistently implement in the concept and design of our products. The many awards received from the national and international trade press and satisfied customers all over the world are convincing evidence of the trust that has been placed in us. They confirm that we are on the right path and motivate us to continuously improve the HELIX brand until we achieve absolute perfection.

Our company has been certified according to DIN EN ISO 9001:2008 since the beginning of 2005: another big step to ensure that HELIX products remain so popular with their highest quality standards among car audio enthusiasts in the future as well.

Your AUDIOTECH FISCHER Team



AUDIOTEC FISCHER

The company

Audiotec Fischer was established by Heinz Fischer in 1990. Since then, the company has developed from a niche supplier to a world market leader meeting high approval worldwide for its excellent car hi-fi products.

The basic concepts of “handmade” and “made in Germany” have always played an important role at Audiotec Fischer from the very beginning. More than 30 years of experience – first in the development of home high-end and then in mobile audio – are reflected in the great innovation and constant attention to detail. The company is headquartered in Schmallenberg, in the idyllically mountainous surroundings of Sauerland in Germany.

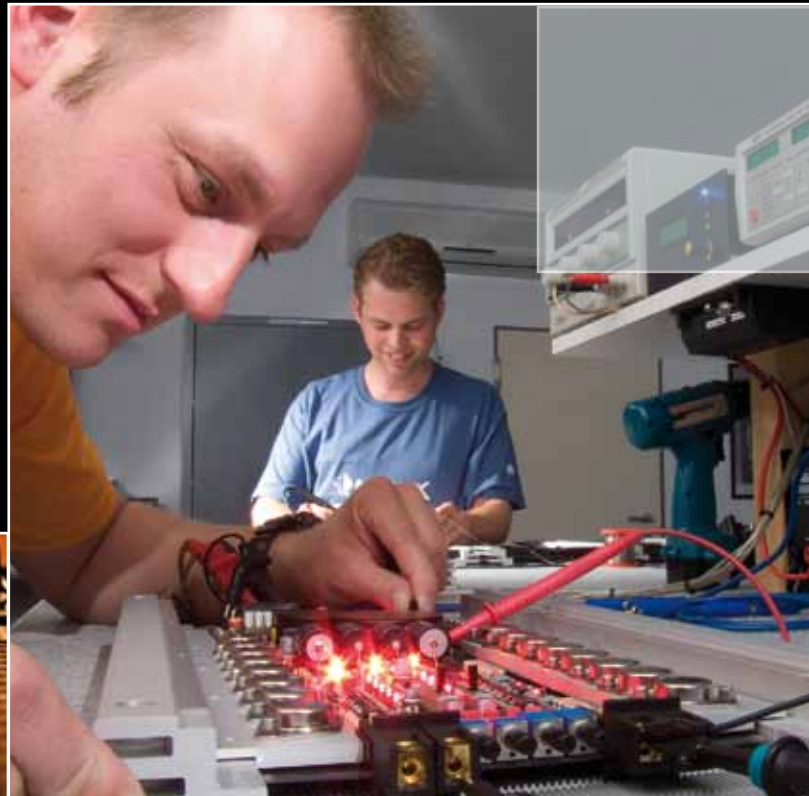


The company places a particularly strong focus on the development of new products, the production of current series and an unrivaled exemplary quality assurance, which forms the foundation for success and highlights Audiotec Fischer's philosophy. The impressive response from car audio customers, many different awards and prizes in Germany and from abroad and, not least, business partners in more than 50 countries around the world speaks for itself.

Most of the suppliers, who, like Audiotec Fischer, are certified according to DIN EN ISO 9001:2008, are also located in Germany and many are even in the same region. Close proximity and direct communication support optimally planned processes and make for high-quality, excellent results.

Products

After the company was formed in 1990, Audiotec Fischer already celebrated internationally sensational success just a short time later with the invention of the power stabilizer. The first Brax amplifier, which is still considered as a reference model among amplifiers today, was then introduced in 1996. Two years later, the launch of the HELIX amplifiers followed. A particular highlight was and still is today the adjustable damping factor, which was developed for a mono amplifier in 1999 and only available from Audiotec Fischer.



The H series, which are among the most successful amplifiers of them all (H400/500/1000), were launched on the market in 1998 and 1999. The legendary HXA 400 was completely overhauled and “reborn” as the state-of-the-art H 400X. Its successful flat design has kept it natural.



In 2004, the A and B series introduced a new technology that gives this amplifier generation incredibly audiophile sound properties. It wasn't surprising, then, that the “A6” 6-channel amp won the EISA Award 2005/2006.

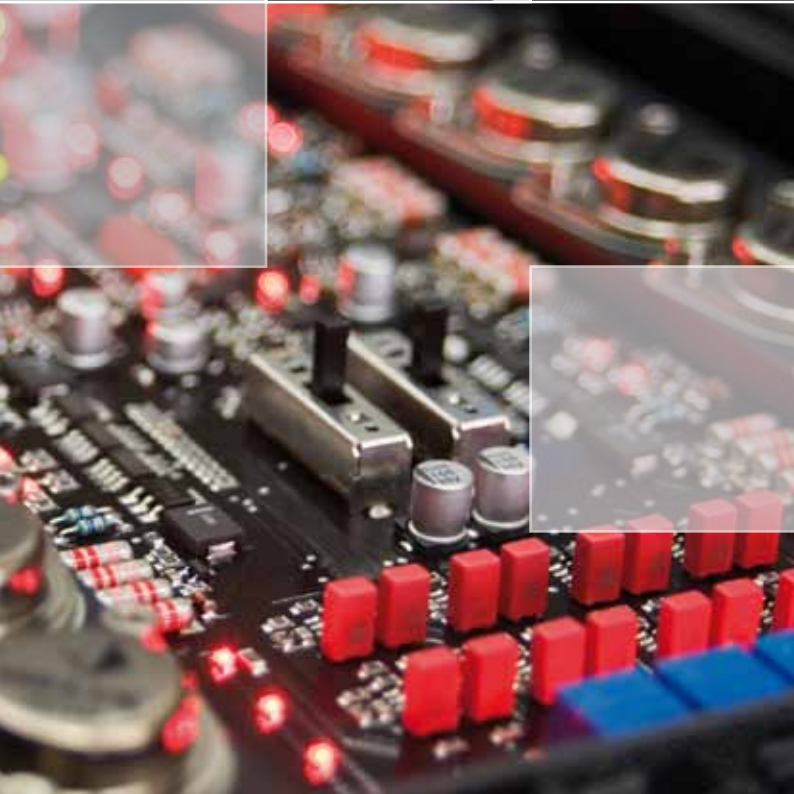
The XXL Power station stands for the successful advanced development of the original power caps that the company started off with. With significantly more features and excellent technology, the XXL has set the standards for a new generation of power stabilizers since 2007.

In addition to amplifiers and loudspeakers, the AAC, the AFC and the CAP33 make up part of a revolutionary, efficient accessories program. Since 2009, HELIX has also offered plug & play systems that are able to transform any vehicle into a concert hall in no time at all.



Audiotec Fischer has been certified according to DIN EN ISO 9001:2008 since 2005 and is regularly subjected to testing by independent testers.

Visit us on the internet as well at:
www.audiotec-fischer.com



AUDIOTEC
FISCHER
INNOVATIVE CAR AUDIO

blue

esprit

precision

competition

plug & play

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blue The HELIX sound experience starts here!

HELIX really starts to kick butt where other systems just lie down and die – the new blue series is an impressive example of the fact that Audiotec Fischer knows no compromises – even in the entry-level segment. This product line sets new standards like never before in its price class – both visually and technically. Extremely solid components packed with power and well-balanced sound properties guarantee a supreme listening experience on the highest level.

LifeStyle *Car Audio*



Highlights

- **New active subwoofers with DSP technology**
- **Speakers with increased power handling**
- **Improved speaker cones with unique HELIX design**
- **Individual HELIX speaker baskets and grilles**
- **All products optimized for maximum reliability**

Features

- Additional high-level speaker inputs
- Integrated active crossover
- 0,2 – 6V inputs for connection to any signal source
- MOSFET switched power supplies for stable output power at any load
- Smart protection circuits against overheating, over- and undervoltage, speaker short circuiting, low impedance and faulty connection
- ADC Anti Distortion Choke (current-compensated input coil) for noise suppression
- 1 % accurate components for perfect sound quality
- Solid connection terminals for lossless signal and power transmission
- Double-sided, extra strong copper-plated printed circuit board for best possible power and signal transmission
- Temperature-optimized heat sink for efficient heat dissipation

Timeless elegance and unconditional reliability – that’s what characterizes the new blue amplifier generation. In addition to the new design with the illuminated HELIX logo, it’s the fine technical difference that make this amplifier generation better than ever before. Additional highlevel speaker inputs make installation easier if the car radio is not equipped with preamp out jacks. Completely re-designed on the inside with PCBs coated with epoxy resin on both sides, these amplifiers provide for optimal signal flow and the high damping factor so typical of HELIX.

B ONE

Digital 1-channel subwoofer amplifier with integrated active crossover, high-level speaker inputs
Cable remote control and 1-ohm stability



B TWO

2-channel amplifier with integrated active crossover and high-level speaker inputs



B FOUR

4-channel amplifier with integrated active crossover and high-level speaker inputs



B FIVE

5-channel amplifier with integrated active crossover, full-active mode and high-level speaker inputs



	B ONE	B TWO	B FOUR	B FIVE
Power handling RMS / max.				
- at 4 ohms	1 x 350 / 700 watts	2 x 80 / 160 watts	4 x 60 / 120 watts	4 x 60 / 120 + 1 x 250 / 500 watts
- at 2 ohms	1 x 600 / 1.200 watts	2 x 120 / 240 watts	4 x 90 / 180 watts	4 x 90 / 180 + 1 x 320 / 640 watts
- at 1 ohm	1 x 950 / 1.900 watts	-	-	-
- bridged at 4 ohms	-	1 x 200 / 400 watts	2 x 180 / 360 watts	2 x 180 / 360 + 1 x 250 / 500 watts
Frequency response	10 Hz - 250 Hz	10 Hz - 30.000 Hz	10 Hz - 30.000 Hz	10 Hz - 30.000 Hz
Bass boost	0 - 18 dB / 45 Hz	0 - 18 dB / 45 Hz	0 - 18 dB / 45 Hz	0 - 18 dB / 45 Hz
Highpass	-	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable
Lowpass	35 Hz - 250 Hz adjustable	40 - 4.000 Hz adjustable	40 - 4.000 Hz adjustable	40 - 4.000 Hz adjustable
Bandpass	-	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable
Subsonic	15 - 50 Hz adjustable	-	-	-
Total harmonic distortion (THD)	< 0,1 %	< 0,03 %	< 0,03 %	< 0,04 %
Signal-to-noise ratio	> 95 dB	> 95 dB	> 95 dB	> 95 dB
Damping factor	200	200	200	200
Input sensitivity	0,2 - 6 V	0,2 - 6,0 V	0,2 - 6,0 V	0,3 - 6,0 V
Dimensions (H x W x D)	50,5 x 260 x 320 mm	50,5 x 260 x 250 mm	50,5 x 260 x 330 mm	50,5 x 260 x 420 mm



Smaller is better

The new crossover in the component systems sports a clearly more compact enclosure, making it much easier to install, while the parts used retain the same high quality. The former air-core inductor in the subwoofer part was replaced with a steel-core inductor with lower internal resistance.



Individual HELIX grilles are included in every blue speaker set.

Matured and repeatedly optimized over the years – the new generation of blue loudspeakers proudly show off their heritage with the embossed HELIX logo on the woofer diaphragms. In addition to its striking good looks, the evolution of this line focused special attention on enhanced sound properties, an increased power rating and even easier installation.

B 52C

2-way component system, 130 mm / 5,25" woofer with injected PP cone, 25 mm / 1" silk dome tweeter with neodymium magnet, LP and HP inline crossover with integrated tweeter protection



B 62C

2-way component system, 165 mm / 6,5" woofer with injected PP cone, 25 mm / 1" silk dome tweeter with neodymium magnet, LP and HP inline crossover with integrated tweeter protection



B 5B

130 mm / 5,25" midwoofer with injected PP cone and 2 x 2 ohms dual voice coil



B 6B

165 mm / 6,5" midwoofer with injected PP cone and 2 x 2 ohms dual voice coil



	B 52Cw	B 62C	B 5B	B 6B
Power handling RMS / max.	40 / 120 watts	50 / 150 watts	40 / 120 watts	50 / 150 watts
Frequency response	65 Hz - 25.000 Hz	55 Hz - 25.000 Hz	60 Hz - 8.000 Hz	50 Hz - 5.000 Hz
Sensitivity	90 dB 1W / 1m	91 dB 1W / 1m	90 dB 1W / 1m	91 dB 1W / 1m
Impedance	4 ohms	4 ohms	2 x 2 ohms	2 x 2 ohms
Mounting depth	52 mm	61 mm	52 mm	61 mm

B 4X

2-way coaxial system, 100 mm / 4" woofer with injected PP cone and integrated 13 mm / 0,5" tweeter with neodymium magnet

**B 5X**

2-way coaxial system, 130 mm / 5,25" woofer with injected PP cone and integrated 13 mm / 0,5" tweeter with neodymium magnet

**B 6X**

2-way coaxial system, 165 mm / 6,5" woofer with injected PP cone and integrated 13 mm / 0,5" tweeter with neodymium magnet

**B 69X**

3-way coaxial system, 160x230 mm / 6" x 9" woofer with injected PP cone, integrated 50 mm / 2" mylar midrange and 13 mm / 0,5" tweeter with neodymium magnet

**B 6N**

2-way coaxial system, 165 mm / 6,5" woofer with injected PP cone and integrated 13mm / 0,5" tweeter with neodymium magnet splash-proof speaker for use in:

- yachts and boats
- outdoor
- bath and sauna

**Features**

- Low resonant woofer cones made from injected polypropylene with unique HELIX logos
- 25 mm / 1" silk dome tweeters (component systems) and 13 mm / 0,5" mylar tweeter (coaxial systems) with neodymium magnets for crispy and clear treble response
- Euro-DIN sized baskets with distinct HELIX design for easy installation in almost any car
- Sturdy rubber protection with the HELIX logo for the magnet systems
- All blue coaxial and component systems are delivered with cables and grilles

	B 4X	B 5X	B 6X	B 69X	B 6N
Power handling RMS / max.	25 / 75 watts	35 / 100 watts	40 / 120 watts	50 / 150 watts	40 / 80 watts
Frequency response	100 Hz - 22.000 Hz	70 Hz - 22.000 Hz	60 Hz - 22.000 Hz	35 Hz - 22.000 Hz	60 Hz - 22.000 Hz
Sensitivity	89 dB 1W / 1m	90 dB 1W / 1m	91 dB 1W / 1m	91 dB 1W / 1m	89 dB 1W / 1m
Impedance	4 ohms	4 ohms	4 ohms	4 ohms	4 ohms
Mounting depth	46 mm	50 mm	58 mm	81 mm	69 mm



You don't have real music-listening enjoyment until you have the right bass sound and that gut-busting feeling in the pit of your stomach. And that's something the new blue subwoofers can do with incredible ease. Rich deep bass sound and high, undistorted maximum sound pressures are the guarantee. And as if that were not enough: thanks to their new dual voice coils with an impedance of 2 x 2 ohms, all the woofers now allow much greater freedom in system configuration (see diagram on the right).

B 10W

250 mm / 10" subwoofer with aluminum die cast basket and 2 x 2 ohms dual voice coil



B 12W

300 mm / 12" subwoofer with aluminum die cast basket and 2 x 2 ohms dual voice coil



B 10E

250 mm / 10" subwoofer with aluminum die cast basket and 2 x 2 ohms dual voice coil in a sealed cabinet made from rigid MDF boards



B 12E

300 mm / 12" subwoofer with aluminum die cast basket and 2 x 2 ohm dual voice coil in a sealed cabinet made from rigid MDF boards



	B 10W	B 12W	B 10E	B 12E
Power handling RMS / max.	250 / 500 watts	300 / 600 watts	300 / 600 watts	350 / 700 watts
Sensitivity	89 dB 1W / 1m	90 dB 1W / 1m	89 dB 1W / 1m	90 dB 1W / 1m
Impedance	2 x 2 ohms	2 x 2 ohms	2 x 2 ohms	2 x 2 ohms
Resonance frequency	39 Hz	29 Hz	-	-
Qms	3,47	4,72	-	-
Qes	0,52	0,58	-	-
Qts	0,45	0,52	-	-
VAS	35 liters	90 liters	-	-
Linear cone excursion	+/- 6 mm	+/- 6 mm	+/- 6 mm	+/- 6 mm
Mounting depth	120 mm	138 mm	-	-
Dimensions (H x W x D)	-	-	335 x 365 x 310 mm	380 x 440 x 380 mm

The easiest way to pack the bass you want into an existing car audio system is to integrate an active subwoofer. And in that case, HELIX has two real high-tech highlights to offer, in addition to the small sized DB 8A, the problem solver for compact cars. The brand-new B 8DSP and B 12DSP subwoofers are equipped with cutting-edge DSP technology that opens up possibilities that were never possible before. You will find a detailed description of these subwoofers in the section entitled "insight" in this catalog.

DB 8A

Ultra-compact 200 mm / 8" active subwoofer in a sealed die cast aluminum enclosure with multifunctional cable remote control for gain, frequency and phase. The ideal installation location is in the passenger foot-well or under the front seats



B 8DSP

Compact 200 mm / 8" active subwoofer in a vented enclosure with innovative "Digital Dynamic Bass Processing", integrated amplifier with 150 watts RMS power and 56 bit digital signal processor



BESTES PRODUKT
Oberklasse
CAR & HI-FI 1/2011

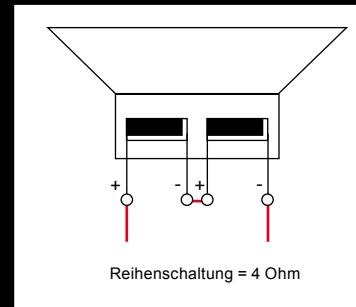
B 12DSP

300 mm / 12" active subwoofer in a vented enclosure with innovative "Digital Dynamic Bass Processing", integrated amplifier with 150 watts RMS power and 56 bit digital signal processor

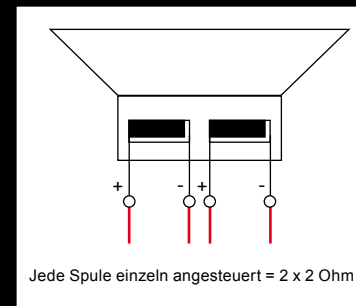


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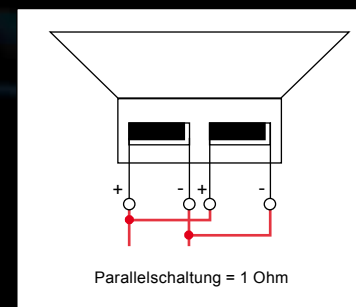
Further configuration options thanks to the dual voice coil



- a) 4-ohm series connection:
ideal for the operation of an output stage designed for bridged mode with a 4-ohm load.



- b) Individual drivers:
Ideal when the output stage connected delivers greater performance in 2-channel mode at 2 ohms than in bridged mode at 4 ohms.

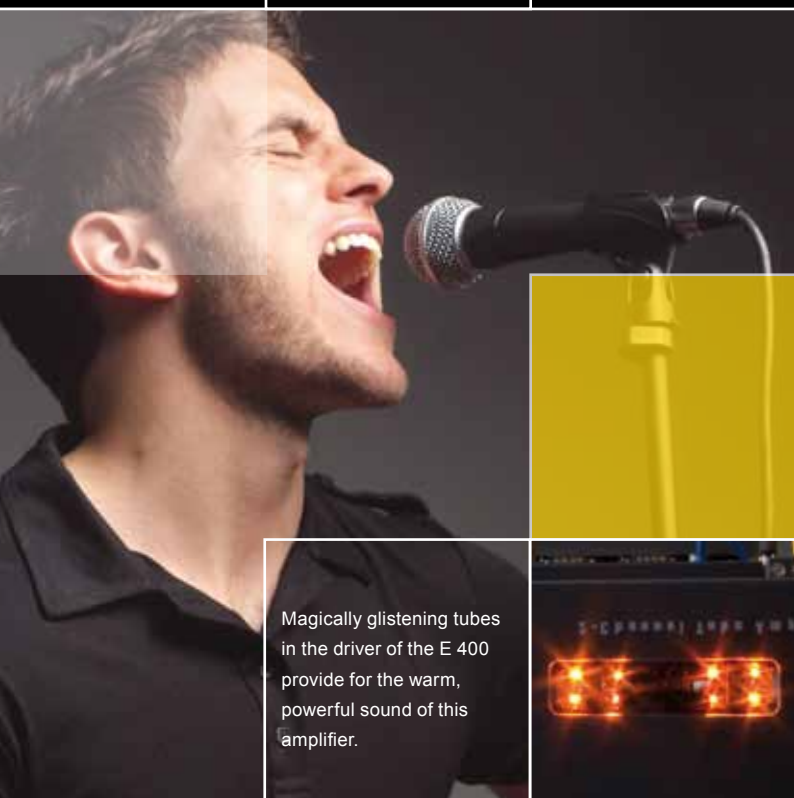


- c) 1-ohm parallel connection:
ideal for operation with output stages that are particularly load-stable (e.g. B ONE)

	DB 8A	B 8DSP	B 12DSP
Power handling RMS / max.	60 / 150 watts	150 / 300 watts	150 / 300 watts
Frequency response	50 Hz - 125 Hz	40 Hz - 125 Hz	30 Hz - 125 Hz
Lowpass	50 Hz - 125 Hz	50 Hz - 120 Hz	50 Hz - 120 Hz
Slope of lowpass	12 dB	12 / 24 dB	12 / 24 dB
Phase	0° / 180°	0° / 360° variable	0° - 360° variable
High-level input	2-ch	4-ch	4-ch
Auto Power on	no	yes, high-level input	yes, high-level input
Digital dynamic bass processing	no	yes	yes
Switch "SPL/SQ"	no	yes	yes
Remote control	included	optional	optional
Dimensions (H x W x D)	85 x 265 x 250 mm	270 x 375 x 310 mm	380 x 470 x 380 mm

The dream of flying high with sound does not necessarily have to rip a deep hole into your wallet. With the esprit series, Audiotec Fischer clearly shows that smart design can achieve acoustic results that are second to none in the fiercely competitive environment – even on a limited budget. Coupled with excellent workmanship and maximum reliability, this is an impressive demonstration of what is technically feasible in this price segment.

High Fidelity Car Audio



Magically glistening tubes in the driver of the E 400 provide for the warm, powerful sound of this amplifier.

E 400

4-channel amplifier with tube driver stage and integrated active crossover



Highlights

- Tube amplifier with very warm sound characteristic
- Woven fiberglass cones
- Pivotal and tiltable silk dome tweeters
- New discreet and noble design with closed mesh grilles
- Very shallow subwoofers with 2 x 2 ohms dual voice coil

Features

- **Dual triode tubes** as drivers for unparalleled sound reproduction
- **RMI** (Real Mixed Input) for generating an optimized mono-summing signal from the left and right channels
- **Integrated electronic crossover**
- **0,4 – 6V inputs** for connection to any signal source
- **Smart protection circuits** against overheating, over- and undervoltage, speaker short circuiting, low impedance and faulty connection
- **1% accurate components** for perfect sound quality
- **24 carat gold-plated solid connection terminals** for lossless signal and power transmission
- **Temperature-optimized heat sink** for efficient heat dissipation

E 400	
Power handling RMS / max.	
- at 4 ohms	4 x 110 / 190 watts
- at 2 ohms	4 x 160 / 270 watts
- bridged at 4 ohms	2 x 320 / 540 watts
Frequency response	20 Hz - 20.000 Hz
Highpass	40 Hz - 250 Hz adjustable
Lowpass	40 Hz - 250 Hz adjustable
Total harmonic distortion (THD)	< 0,05 %
Signal-to-noise ratio	> 90 dB
Damping factor	> 150
Input sensitivity	0,4 - 6,0 V
Dimensions (H x W x D)	58 x 470 x 220 mm



REVIEW E 62C

"Great workmanship and impressively powerful sound. The E 62C is one of the best component systems in its class."

(Car & HiFi)

**Woven fiberglass**

Fiberglass is a high-quality fiber-plastic compound whose mechanical properties make it the ideal material for loudspeakers. It combines low weight with high failure strain and an exceptional resistance to adverse environmental influences. Its woven structure delivers the necessary stability of the diaphragms with high inner damping to provide immunity to resonances at the same time. The results: powerful, unadulterated sound quality at the highest level.

"Never change a winning team" – this was the motto behind the advanced development of the new esprit components and coaxial loudspeakers. And that's why we concentrated on giving the exceptional sound properties of this series a new, more subtle look. The fiberglass cones that shimmer elegantly in grey and black and the new closed grilles are both convincing promise of what these high-end loudspeaker systems have to deliver.

E 52C

2-way component system, 130 mm / 5,25" woofer with woven fiberglass cone, 25 mm / 1" silk dome tweeter with neodymium magnet, separate crossover with tweeter protection

**E 62C**

2-way component system, 165 mm / 6,5" woofer with woven fiberglass cone, 25 mm / 1" silk dome tweeter with neodymium magnet, separate crossover with tweeter protection



	E 52C	E 62C
Power handling RMS / max.	50 / 150 watts	60 / 180 watts
Frequency response	60 Hz - 25.000 Hz	50 Hz - 25.000 Hz
Sensitivity	90 dB 1W/1m	91 dB 1W / 1m
Impedance	4 ohms	4 ohms
Mounting depth	54 mm	65 mm

E 4X

2-way coax system,
100 mm / 4" woofer with woven fiber-
glass cone, integrated
19 mm / 0,75" silk dome tweeter with
neodymium magnet



E 5X

2-way coax system,
130 mm / 5,25" woofer with woven
fiberglass cone,
19 mm / 0,75" silk dome tweeter with
neodymium magnet



E 6X

2-way coax system
165 mm / 6,5" woofer with woven
fiberglass cone,
19 mm / 0,75" silk dome tweeter with
neodymium magnet



E 69X

3-way coax system,
160 x 230 mm / 6" x 9" woofer with
woven fiberglass cone, integrated
50 mm mylar midrange, 19 mm / 0,75"
tweeter with silk dome and neodymium
magnet



HELIX grilles are included in every esprit speaker set

Features

- Very stiff and non-resonating woofer cones made from woven fiberglass
- Specially shaped rubber surrounds for greater effective cone surface and extended maximum excursion
- 25 mm / 1" silk dome tweeters (component systems) and 19 mm / 0,75" mylar tweeter (coaxial systems) with neodymium magnets for crispy and clear treble response
- 360° swiveling and 25° tilting tweeters for optimal adjustment to the listening position*
- Euro-DIN sized baskets with distinct HELIX design for easy installation in almost any car
- Crossovers of the component systems with high-quality parts and adjustable tweeter level +/- 2dB
- All esprit coaxial and component systems are delivered with cables and grilles

	E 4X	E 5X	E 6X	E 69X
Power handling RMS / max.	30 / 90 watts	40 / 120 watts	50 / 150 watts	50 / 150 watts
Frequency response	80 Hz - 22.000 Hz	65 Hz - 22.000 Hz	55 Hz - 22.000 Hz	35 Hz - 22.000 Hz
Sensitivity	89 dB 1W / 1m	90 dB 1W / 1m	91 dB 1W / 1m	92 dB 1W / 1m
Impedance	4 ohms	4 ohms	4 ohms	4 ohms
Mounting depth	48 mm	54 mm	65 mm	76 mm

The new esprit subwoofers really come into play when space is scarce but the desire for rich bass sound is at the top of the list. Although the black fiberglass coating on the outside is the only thing that makes them look different to their predecessors, what's on the inside is completely new. Dual voice coils with an impedance of 2 x 2 ohms predestine them for use in compact, sealed enclosures with the best in impulse response. Their extremely flat structural shape allows for forms never dreamed of before for the enclosure design.

E 8W

Very shallow 200 mm / 8" subwoofer with aluminum die cast basket, honeycomb membrane and 2 x 2 ohms dual voice coil



E 10W

Very shallow 250 mm / 10" subwoofer with aluminum die cast basket, honeycomb membrane and 2 x 2 ohms dual voice coil



E 12W

Very shallow 300 mm / 12" subwoofer with aluminum die cast basket, honeycomb membrane and 2 x 2 ohms dual voice coil



Features

- 2 x 2 Ohms dual voice coil for more flexible speaker configurations
- Extremely stiff honeycomb membrane with fiberglass coating
- Solid, sturdy basket made of die cast aluminum
- Particularly flat installation depth for ultra-flat subwoofer designs
- Solid gold-plated connections
- Large maximum cone excursions thanks to wide rubber surround
- Parameters optimized for use in compact, sealed enclosures

	E 8W	E 10W	E 12W
Power handling RMS / max.	200 / 300 watts	300 / 450 watts	400 / 600 watts
Sensitivity	85 dB 1W / 1m	88 dB 1W / 1m	88 dB 1W / 1m
Impedance	2 x 2 ohms	2 x 2 ohms	2 x 2 ohms
Resonance frequency	52 Hz	46 Hz	37 Hz
Qms	5,6	5,3	4,3
Qes	0,83	0,64	0,55
Qts	0,73	0,57	0,49
VAS	18 liters	28 liters	48 liters
linear cone excursion	+/- 6 mm	+/- 5,5 mm	+/- 5,5 mm
Mounting depth	58 mm	80 mm	87 mm

The audiophile heaven is within reach!

Finest technology at the highest level in timelessly elegant design – that’s the precision series from HELIX. In terms of design, we’ve pulled out all the stops to spirit the listeners away into new spheres of musical enjoyment. This is certain to delight music-lovers just as much as the sound freaks who love dynamics through and through. Regardless of whether “pianissimo” or “fortissimo” – every musical detail is reproduced with the utmost precision. But of course the name of this product line already told us that – it’s precision!

Advanced High-End



Features

- **Extremely fast** driver circuits for minimal distortion
- Output stage with 16 bipolar power transistors
- **RMI** (Real Mixed Input) for generating an optimized mono-summing signal from the left and right channels
- **NFI** (Noise Free Input) for distortion-free listening
- **ADC** Anti Distortion Choke (current-compensated input coil) for noise suppression
- **IMS technology** (Integrated Managing Software) – processor controlled monitoring of all functions
- **Smart protection circuits** against overheating, over- and undervoltage, speaker short circuiting, low impedance and faulty connection
- **SMD technology** (Surface Mounted Devices) combine minimum space requirements with highest reliability
- Double-sided, extra strong copper-plated printed circuit board for best possible power and signal transmission
- **1% accurate components** for perfect sound quality
- **24 carat gold-plated solid connection terminals** for lossless signal and power transmission
- Power supply terminals for cable cross sections of up to 50 mm²
- **Temperature-optimized heat sink** for efficient heat dissipation

Highlights

- Extremely stable amplifiers in an extraordinary shallow housing
- Processor-controlled technology for optimized operation
- Speakers with scooped sisal cones
- Non-compromising subwoofers for compact enclosures
- Completely made from selected components in Germany

REVIEW

“Extraordinarily technically mature, the sound is a doozy – and also visually a real HELIX.”
(Car&HiFi about P200)

“The measured data is impressive to the core. In addition, it has a very special, genuine and sensible character. A masterpiece of engineering and manufacturing at its finest!” (autohifi about P200)

“Especially the two newcomers P200 and P400 are real highlights!” (autohifi about the P-amplifiers)

The best of both worlds – extremely fast MOSFET driver circuits in Class A operation combined with enormously load-stable, power-potent “afterburners” in bipolar technology. This is the recipe for success for the particularly flat precision amplifiers, which, thanks to their sophisticated processor control, don’t get their feathers ruffled in any situation. Improved again and again over the years, these powerhouses with the characteristic, transparent enclosure covers have reached a sound level that is unrivalled, not only in the value-for-money category.

P 200

2-channel amplifier with integrated active crossover

also available as 24 volt version



P 400

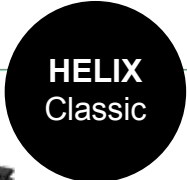
4-channel amplifier with integrated active crossover

also available as 24 volt version



H 400X

4-channel amplifier with integrated active crossover



	P 200	P 400	H 400X
Power handling RMS / max.			
- at 4 ohms	2 x 130 / 220 watts	4 x 110 / 190 watts	4 x 70 / 140 watts
- at 2 ohms	2 x 225 / 380 watts	4 x 175 / 300 watts	4 x 125 / 250 watts
- at 1 ohm	2 x 340 / 580 watts	-	-
- bridged at 4 ohms	1 x 450 / 765 watts	2 x 350 / 595 watts	2 x 250 / 500 watts
- bridged at 2 ohms	1 x 675 / 1.145 watts	-	-
Frequency response	15 Hz - 20.000 Hz	15 Hz - 20.000 Hz	20 Hz - 20.000 Hz
Bass boost	0 - 9 dB / 40 - 120 Hz	-	-
Highpass	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable
Lowpass	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable
Bandpass	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable	15 - 4.000 Hz adjustable
Total harmonic distortion (THD)	< 0,006 %	< 0,006 %	< 0,009 %
Signal-to-noise ratio	> 95 dB	> 95 dB	> 100 dB
Damping factor	> 600	> 600	> 300
Input sensitivity	0,3 - 8,5 V	0,3 - 8,5 V	0,7 - 8,0 V
Dimensions (H x W x D)	35 x 432 x 240 mm	35 x 432 x 240 mm	31,5 x 336 x 200 mm



REVIEW P 236

"The P 236 belongs to the best component systems of its class. Concerning euphony it is completely unrivaled."
(Car & HiFi)

"In fact, its efficiency as well as its maximum level is sensational"
(autohifi)



REVIEW H 236

"As expected, the H 236 was the highlight of the present test review. It played well-balanced and impressed with its natural and relaxed way of rendition."
(Car&HiFi)



Real stars without all the airs – the precision loudspeakers show that spectacular acoustic characteristics don't necessarily have to put on a spectacular show. Thanks to the uncompromising, perfected "made in Germany" design, these sound specialists have been convincing proof for many years that their sound capabilities, which have been highly acclaimed in many test reports, are the logical consequence of the sum of their technical parts.

P 234

2-way component system, 100 mm / 4" woofer with scooped sisal cone, 25 mm / 1" silk dome tweeter with neodymium magnet, separate crossover with tweeter protection, grille included in delivery



P 235

2-way component system, 130 mm / 5,25" woofer with scooped sisal cone, 25 mm / 1" silk dome tweeter with neodymium magnet, separate crossover with tweeter protection, grille included in delivery



P 236

2-way component system, 165 mm / 6,5" woofer with scooped sisal cone, 25 mm / 1" silk dome tweeter with neodymium magnet, separate crossover with tweeter protection, grille included in delivery



H 236

2-way component system, 165 mm / 6,5" woofer with stiff paper cone, 25 mm / 1" silk dome tweeter with neodymium magnet, separate crossover with tweeter protection, grille included in delivery



	P 234	P 235	P 236	H 236
Power handling RMS / max.	40 / 60 watts	50 / 70 watts	60 / 80 watts	60 / 80 watts
Frequency response	85 Hz - 21.000 Hz	65 Hz - 21.000 Hz	45 Hz - 21.000 Hz	50 Hz - 21.000 Hz
Sensitivity	89 dB 1W / 1m	90 dB 1W / 1m	90 dB 1W / 1m	90 dB 1W / 1m
Impedance	4 ohms	4 ohms	4 ohms	4 ohms
Mounting depth	47 mm	58 mm	60 mm	62 mm



In the precision and competition lines, Audiotec Fischer uses only diaphragms made of sisal fiber manufactured in an elaborate production process. The mechanical advantages of sisal, such as high stability and inner damping, are combined in an ideal way with lowest weight. No wonder that the woofers equipped with sisal diaphragms display uniquely dynamic characteristics regarding fidelity, lowest distortion and high sensitivity, at the same time with a linear frequency response.

REVIEW P 206

"Bass range rich in extreme depths, balanced sound characteristics."
(autohifi about P 206)



SINGLE SPEAKERS



The real sound freak has his own ideas about the ideal loudspeaker combination. That's why Audiotec Fischer also offers all loudspeakers in the precision series as single speakers – e.g. ideal for building fully active systems. In combination with the widely varied configuration options of all HELIX amplifiers, the possibilities are virtually endless...

P 1

25 mm / 1" silk dome tweeter with neodymium magnet



P 203

80 mm / 3,2" midrange with scooped sisal cone and neodymium magnet



P 204

100 mm / 4" midwoofer with scooped sisal cone, grille included in delivery



P 205

130 mm / 5,25" midwoofer with scooped sisal cone, grille included in delivery



P 206

165 mm / 6,5" midwoofer with scooped sisal cone, grille included in delivery



	P 1	P 203	P 204	P 205	P 206
Power handling RMS / max.	-	30 / 50 watts	40 / 60 watts	50 / 70 watts	60 / 80 watts
Frequency response	2.500 Hz - 21.000 Hz	125 Hz - 10.000 Hz	85 Hz - 9.000 Hz	65 Hz - 6.500 Hz	45 Hz - 5.000 Hz
Resonance frequency	1.550 Hz	119 Hz	124 Hz	79 Hz	62 Hz
Sensitivity	89 dB 1W / 1m	84 dB 1W / 1m	89 dB 1W / 1m	90 dB 1W / 1m	90 dB 1W / 1m
Impedance	4 ohms	4 ohms	4 ohms	4 ohms	4 ohms
Mounting depth	15 mm	34 mm	48 mm	60 mm	65 mm

There are only a few manufacturers who understand the art of improving an already excellent basis. HELIX has optimized the new woofer with loving attention to detail and included elements of the legendary SPXL 12 in the high-precision series. The rubber surround is not only sewn to the cone, it is also firmly screwed to the basket using the machined mounting ring. The cone itself – a Kevlar/paper sandwich design – is also new and stiffer than before to withstand even the strongest impulses without warping.

P 8W

200 mm / 8" subwoofer with aluminum die cast basket and extremely stiff Kevlar/paper sandwich cone, optimized for use in a compact vented enclosure



P 10W

250 mm / 10" subwoofer with aluminum die cast basket and extremely stiff Kevlar/paper sandwich cone, optimized for use in compact vented enclosure



P 12W

300 mm / 12" subwoofer with aluminum die cast basket and extremely stiff Kevlar/paper sandwich cone, optimized for use in a compact vented enclosure



FEATURES

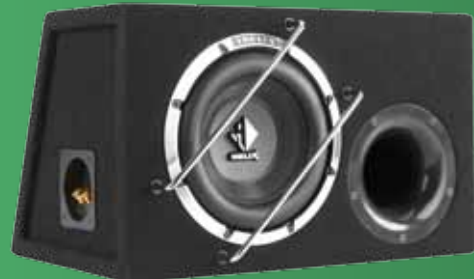
- Extremely stiff Kevlar/paper sandwich cone
- Oversized voice coils with an impressive winding height for maximum electrical power handling and high linear excursion
- Large magnet systems for low Qts, ideal for compact vented enclosures
- Double-vented voice long-stroke coils for minimized compression effects
- Aluminum die cast basket with diamond cut surround mounting ring
- Solid screw terminals

	P 8W	P 10W	P 12W
Power handling RMS / max.	300 / 600 watts	350 / 700 watts	400 / 800 watts
Sensitivity	87 dB 1W / 1m	87 dB 1W / 1m	87 dB 1W / 1m
impedance	4 ohms	4 ohms	4 ohms
Resonance frequency	42 Hz	31 Hz	21 Hz
Qms	4,2	2,97	3,59
Qes	0,27	0,37	0,33
Qts	0,26	0,33	0,3
VAS	18 liters	42,5 liters	119 liters
Linear cone excursion	+/- 6 mm	+/- 8 mm	+/- 11 mm
Mounting depth	113 mm	128 mm	139 mm

Ideal subwoofers “dressed” in their best – anyone who doesn’t want to build the appropriate enclosure for the precision woofers can fall back on these three perfectly designed constructions. Solid, low-resonance enclosures made of MDF and flow-optimized bass-reflex tubes combined with the new chassis with the Kevlar/paper sandwich cone provide for phenomenal bass reproduction despite compact dimensions.

P 8E

200 mm / 8" subwoofer with aluminum die cast basket and extremely stiff Kevlar/paper sandwich cone in a compact vented enclosure



P 10E

250 mm / 10" subwoofer with aluminum die cast basket and extremely stiff Kevlar/paper sandwich cone in a compact vented enclosure



P 12E

300 mm / 12" subwoofer with aluminum die cast basket and extremely stiff Kevlar/paper sandwich cone in a vented enclosure



FEATURES

- Enclosure completely made from MDF boards
- Wall thickness up to 28 mm and additional cross-bracing for minimal enclosure resonance
- Particularly large-sized bass-reflex tunnel with flow-optimized funnels at each end for minimum static noise
- Extremely hard-wearing felt outer surface with embroidered HELIX logo
- Loudspeaker protection thanks to sturdy metal holders

	P 8E	P 10E	P 12E
Power handling RMS / max.	350 / 700 watts	400 / 800 watts	450 / 900 watts
Sensitivity	89 dB 1W / 1m	89 dB 1W / 1m	89 dB 1W / 1m
Impedance	4 ohms	4 ohms	4 ohms
Linear cone excursion	+/- 6 mm / 0,24"	+/- 8 mm / 0,32"	+/- 11 mm / 0,43"
Dimensions (H x W x D)	265 x 435 x 270 mm	355 x 500 x 275 mm	395 x 610 x 360 mm

The first stand-alone DSP that deserves to be called a HELIX. The new P-DSP is more than convincing proof that noisy, distorting sound processors are finally a thing of the past. Excellent technical specs are combined with a feature package that could hardly be more impressive in actual practice. Intuitive operation thanks to a clearly structured graphical PC interface enables any ambitious sound freak to optimize the sound virtually any which way.

P-DSP

Digital 8-channel signal processor with 56-bit signal processing



DSP FEATURES IN DETAIL

- 30-band graphic EQ in 1/3 oct steps
- Fine tuning in 1/12 oct steps
- Fine tuning of the quality from 4.3 to 15
- High-pass filter in 1/12 oct steps for full-range channels and 1-Hz steps for subwoofer channels
- Low-pass filter in 1/12 oct steps for full-range channels and 1-Hz steps for subwoofer channels
- Time alignment in steps of 7 mm / 0,02 ms
- Phase adjustable between 0° / 180° for full-range channels and 0° - 360° in 22,5° steps for subwoofer channels
- Available filter characteristics: Butterworth, Bessel, Tschebyscheff, Linkwitz & Self-define
- 6 - 30 dB / oct slope
- Output level per channel from +5 dB up to -60 dB
- Free channel routing between input and output channels
- Sum signal formation from up to 4 input channels
- 2 channels can be defined as subwoofer channels
- All channels can be linked with one another for easier configuration

Features

- Windows interface – communication via USB 2.0
- MicroSD slot to upload DSP settings without having to connect the DSP to a PC
- Special audio DSP with a resolution of 56 bits – optimized for highest sound quality
- Freely configurable inputs and outputs
- Graphical 30-band EQ per channel with the “fine adjustment” of the individual bands in 1/12 octave steps and time correction in 7-mm steps, all established filter characteristics are available and much more
- Inputs: 6 x RCA, 4 x high-level, 1 x optical, 1 x control input, MicroSD and USB
- Outputs: 8 x RCA and remote output
- Extremely compact dimensions: 176 x 100 x 42 mm
- Compatible with the HELIX Optical & Bluetooth Interface, which will soon go on the market – this makes it possible to operate the system using a Smartphone and to configure it with a PC

	P-DSP
Inputs	6 x RCA 4 x high-level speaker input 1 x optical SPDIF format (6-192 kHz sampling rate) 1 x remote in
Input sensitivity	RCA 3 Volts High-level 9 volts
Outputs	8 x RCA 1 x remote out
Output voltage	4 volts
Frequency response	10 - 22.000 Hz
DSP resolution	56 bits
DSP processing power	172 MHz
DSP type	Audio signal processor
Number of DSP processors	1
Signal converter	A/D: BurrBrown D/A: BurrBrown
Digital input signal-to-noise ratio	112 dB
Audio input signal-to-noise ratio	107 dB
Total harmonic distortion (THD)	0,002%
Operating voltage	9,2 - 18 volts
Additional features	Control input, MicroSD, USB,
Dimensions (H x W x D)	176 x 122 x 42 mm

Focusing on what’s most important – this was the basic prerequisite in the development of our PC user interface, which is more or less identical for all the HELIX DSP devices. Whether it’s the PP50 DSP, the P-DSP or the C-DSP – apart from the differences in the range of features provided, the operation of these systems couldn’t be easier. The clearly structured presentation on just three screens without any sub-menus is self-explanatory in many cases and quick and easy to learn. However, anyone looking for the “sound gimmicks” offered by some processors will be disappointed here. Each individual function serves one purpose and one purpose only – to get the best possible sound out of the loudspeakers and to compensate for the acoustic shortcomings of the vehicle in the best way possible.

PC SYSTEM REQUIREMENTS

- 1 GHz processor minimum
- 1 GHz RAM memory minimum
- 25 MB free hard disk space minimum
- 1 free USB port
- Screen resolution 1024 x 768 pixel minimum
- The software was tested with the following operating systems: Windows XP, Windows Vista (32bit) und Windows 7.



P-DSP PC tool user interface “channel routing” (P-DSP and C-DSP only)

This input screen can be used to freely allocate the inputs to the outputs. Up to any four input signals can be added to any output channel.



“Time Correction” PC tool user interface

This input screen displays the settings for the time alignment and phase of all the channels at the same time. This makes it possible to adjust these values very conveniently without having to switch back and forth between the channels.



“Equalizer” PC tool user interface

Everything at a glance – this screen displays all the equalizer, high-pass/low-pass filter settings and the time alignment/phase for one channel. The channel you would like to adjust can be selected at the click of the mouse. If you want to adjust two or more channels at the same time, they can be linked with one another. Up to four different setups can be compared with one another directly.

Welcome at the pinnacle of sonic performance!

The competition series reflects all Audiotec Fischer's know-how and long years of experience in the development of high-end products. A perfect synthesis of innovative technologies, unbridled power and unique musical ability was created here. Refined in terms of design and production down to the smallest detail and optimized for maximum longevity, every single product in the competition line defines the benchmark that the competition has to meet.

Professional High-End



Music stimulates emotions – the art of music reproduction lies in appealing to all the senses at the same time and in giving the audience that well-known “goose bumps” feeling. There’s often just a fine line that decides whether it happens or not. And it’s exactly these fine details that distinguish a very good car audio system from what the competition loudspeakers and amplifiers are able to do, namely to reproduce music as if the musicians were playing directly in front of the audience. Nothing is added, nothing is left out – something that sounds so easy but which actually requires a lot of effort to achieve. With the competition products, Audiotec Fischer demonstrates once again that even this challenge wasn’t one that couldn’t be beaten.

Highlights

- Extremely stable output stage with selected MOSFET transistors
- Subwoofer amp with class D technology
- Woofer with unique sisal cones
- Super fast tweeter with coupling volume
- SPL subwoofer for extraordinary maximum sound pressure and audiophile sound characteristic

Features

- **Class A technology** used in driver stages for minimal distortion
- Output stages with up to 32 selected MOSFET power transistors
- Intelligent active crossover for full-active mode
- **Bass boost control** with variable center frequency
- Mono/stereo switch for bridge mode – eliminating the need for a Y adapter
- **RMI** (Real Mixed Input) for generating an optimized mono-summing signal from the left and right channels
- **NFI** (Noise Free Input) for distortion-free listening
- **ADC** Anti Distortion Choke (current-compensated input coil) for noise suppression
- **IMS** technology (Integrated Managing Software) – processor controlled monitoring of all functions
- **Smart protection circuits** against overheating, over- and undervoltage speaker short circuiting, low impedance and faulty connection
- **SMD technology** (Surface Mounted Devices) combine minimum space requirements with highest reliability
- Double-sided, extra strong copper-plated printed circuit board for best possible power and signal transmission
- 1% accurate components for perfect sound quality
- **24 carat gold-plated solid connection terminals** for lossless signal and power transmission
- Power supply terminals for cable cross sections of up to 50 mm²
- Temperature-optimized heat sink for efficient heat dissipation

There are lots and lots of powerful amps out there – but only those that unconditionally control the connected loudspeakers with a grip of iron and an extremely high damping factor bear the name of HELIX. The output stages of the competition line are what the high ender calls “wired for power”. Whether it’s sheer power or enormous musical sensitivity – these power packs know every trick in the book. If you finally want to stop looking for the perfect amp, then this is where the search will end.

A 2

2-channel amplifier with integrated active crossover



A 4

4-channel amplifier with integrated active crossover



SPXL 1000

1-channel Class D amplifier with 1 ohm stability



	A 2	A 4	SPXL 1000
Power handling RMS / max.			
- at 4 ohms	2 x 150 / 250 watts	4 x 85 / 150 watts	1 x 750 / 1.275 watts
- at 2 ohms	2 x 270 / 450 watts	4 x 150 / 250 watts	1 x 1.200 / 2.040 watts
- at 1 ohm	2 x 395 / 650 watts	-	1 x 1.600 / 2.720 watts
- bridged at 4 ohms	1 x 540 / 900 watts	2 x 270 / 450 watts	-
- bridged at 2 ohms	1 x 790 / 1.300 watts	2 x 395 / 650 watts	-
Frequency response	15 Hz - 20.000 Hz	15 Hz - 20.000 Hz	10 Hz - 250 Hz
Bass boost	0 - 9 dB / 30 - 120 Hz	-	0 - 18 dB / 40 Hz
Highpass	15 - 6.000 Hz adjustable	15 - 7.000 Hz adjustable	-
Lowpass	15 - 6.000 Hz adjustable	15 - 7.000 Hz adjustable	35 Hz - 250 Hz adjustable
Bandpass	15 - 6.000 Hz adjustable	15 - 7.000 Hz adjustable	-
Phase	-	-	0 - 180° adjustable
Total harmonic distortion (THD)	< 0,009 %	< 0,009 %	< 0,33 %
Signal-to-noise ratio	> 100 dB	> 100 dB	> 96 dB
Damping factor	> 1.000	> 450	> 450
Input sensitivity	0,5 - 8,0 V	0,5 - 8,0 V	0,2 - 6,0 V
Dimensions (H x W x D)	35 x 432 x 240 mm	35 x 432 x 240 mm	55 x 430 x 277 mm

The new reference speakers in the competition series raise the bar to a new height for fantastic sound quality. The legendary sisal woofer cones were equipped with an additional structural damping layer made of elastomer, which improves the acoustic properties yet again. The tweeter enclosure also underwent a complete overhaul. Anyone who wants to operate these loudspeakers as fully active speakers (e.g. using our new digital signal processors) can put together the system of their choice by combining the individual components.

C 1T

25 mm / 1" high-end tweeter with silk dome, drilled neodymium magnet and damped coupling volume for especially low resonance frequency. Delivery in a noble wooden jewel case.



C 2M

54 mm / 2,1" high end midrange speaker with silk dome, 10x drilled neodymium magnet and damped coupling volume for especially low resonance frequency. Delivery in a noble wooden jewel case.



C 6B

165 mm / 6,5" high-end woofer with scooped sisal cone and special elastomer structural damping, delivered in a noble wooden jewel case



Features

- Woofer with sturdy aluminum die cast basket
- Large coupling volumes for tweeter and midrange allows exceptionally low crossover frequency
- New woofer cone with scooped, long-fibered sisal with additional elastomer structural damping
- Virtually compression-free conversion of the amplifier power into sound pressure
- Lowest manufacturing tolerances and exclusive use of selected materials
- Frequency crossover with tweeter-level adjustment and double woofer mode

	C 1T	C 2M	C 6B
Power handling RMS / max.	-	40 / 80 watts	150 / 300 watts
Frequency response	820 Hz - 25.000 Hz	550 Hz - 7.000 Hz	47 Hz - 5.000 Hz
Resonance frequency	820 Hz	520 Hz	56 Hz
Sensitivity	90 dB 1W / 1m	93 dB 1W / 1m	91 dB 1W / 1m
Impedance	4 ohms	4 ohms	4 ohms
Mounting depth	21 mm	29 mm	67 mm

Like the loudspeaker systems, the frequency crossovers of the components systems have also been optimized even further. Made up of the finest components, they offer, in addition to the adjustment of the tweeter level, the option of connecting a second woofer for each channel without any change in the crossover frequencies. The so-called "double woofer mode" provides for additional pressure in the kick-bass range.

C 62C

2-way component system consisting of C 6B, C 1T and a passive crossover, delivered in a noble wooden jewel case.



C 63C

3-way component system consisting of C 6B, C 2M, C 1T and a passive crossover, delivered in a noble wooden jewel case.



	C 62C	C 63C
Power handling RMS / max.	150 / 300 watts	190 / 380 watts
Frequency response	47 - 25.000 Hz	47 - 25.000 Hz
Sensitivity	91 dB 1W / 1m	91 dB 1W / 1m
Impedance	4 ohms	4 ohms
Mounting depth	67 mm	67 mm



REVIEW

"HELIX proves with its SPXL 12 that it is possible to create SPL sound on a reference level. SPXL: more than SPL."
(Car&HiFi)



The most powerful subwoofer that HELIX has ever made. This deep bass giant is able to convert up to 3000 watts of amp power into amazing sound, even at the lowest frequencies without any compression. It's no wonder, because its extremely long-excursion driver system can move incredible volumes of air. It's exactly the same as for cars: there's absolutely nothing that can replace cubic capacity.

Yet for all this sound power, the SPXL 12 is also the master of exceptionally fine dynamics, able to delight the most audiophile listener. This outstanding talent finds its ideal sparring partner in the HELIX SPXL 1000, which rises to the challenge of providing the power needed to drive the system with ease.

SPXL 12

300 mm / 12" high end SPL subwoofer with aluminum die cast basket and Kevlar/paper sandwich cone, optimized for use in vented enclosures



Features

- Extremely stable Kevlar/paper sandwich cone
- Huge 100 mm / 4" flat wire voice coil with incredible 57,5 mm / 2,26" winding height
- Black-coated aluminum voice coil former for excellent heat dissipation
- Giant 10 kg / 3 x 100 oz magnet system with chrome-plated pole plates
- Double spider avoids non-linearities of the cone suspension
- Long-excursion rubber surround with double stitching for highest mechanical rating
- Double-vented voice coil for minimized compression effects
- Torsion-free and flow-optimized aluminum die cast basket with diamond cut and machined surround fixing ring

	SPXL 12
Power handling RMS / max.	1.500 / 3.000 watts
Sensitivity	85 dB 1W / 1m
Impedance	2 x 2 ohms
Resonance frequency	31 Hz
Qms	4,1
Qes	0,51
Qts	0,46
VAS	38,4 liters
linear cone excursion	+/- 22,5 mm
Mounting depth	210 mm

DSP FEATURES IN DETAIL

- 30-band graphic EQ in 1/3 oct steps
- Fine adjustment in 1/24 oct steps
- Fine tuning of the quality from 0,5 to 15
- High-pass filter in 1/24 oct steps for full-range channels and 1-Hz steps for subwoofer channels
- Low-pass filter in 1/24 oct steps for full-range channels and 1-Hz steps for subwoofer channels
- Time alignment in steps of 7 mm / 0,02 ms
- Phase adjustable between 0° / 180° for full-range channels and 0° - 360° in 22,5° steps for subwoofer channels
- Available filter characteristics: Butterworth, Bessel, Tschebyscheff, Linkwitz & Self-define
- 0 - 42 dB / oct slope
- Output level per channel from +5 dB up to -60 dB
- Free channel routing between input and output channels
- Sum signal formation from up to 4 input channels
- Any channel can be defined as a subwoofer channel
- All channels can be linked with one another for easier configuration

The “Rolls Royce” of digital signal processors. The C-DSP is designed for highest sound quality without compromise from the inputs to the outputs. Not one but two audio processors with 56-bit resolution ensure loss-free signal processing and the finest A/D and D/A converters otherwise used only in studio technology guarantee previously unheard-of signal-to-noise ratios and THD values. The loving attention to detail in the hardware is just as obvious as it is in the software. The intuitive user interface does without all the gimmicks to focus all the more on extremely precise setting options that are certain to make the heart of any sound enthusiast beat faster.

C-DSP

Digital high-end 8-channel signal processor with 56 bit signal processing



Features

- Windows interface – communication via USB 2.0
- MicroSD slot to upload DSP settings without having to connect the DSP to a PC
- TwinPower – two audio DSPs with 56-bit resolution for optimal sound properties and maximum computing power
- Future-oriented hardware features for virtually unlimited expansion options
- Freely configurable inputs and outputs
- Graphical 30-band EQ per channel with the “fine adjustment” of the individual bands in 1/24 octave steps and a quality setting between 0,5 and 15, time correction in 7-mm steps, all established filter characteristics are available and much more.
- Inputs: 8 x RCA, 8 x high-level, 1 x optical, 1 x control input, MicroSD and USB
- Outputs: 8 x RCA and remote output
- Input sensitivity adjustable
- High-end AD & DA converter
- Start/stop capable down to 6 volts
- Dimensions: 190 x 190 x 42 mm
- Compatible with the HELIX Optical & Bluetooth Interface, which will soon go on the market – this makes it possible to operate the system using a Smartphone and to configure it with a PC

	C-DSP
Inputs	8 x RCA 8 x high-level speaker inputs 1 x optical SPDIF format (6-192 kHz sampling rate) 1 x remote in
Input sensitivity	RCA 1 - 6 volts High-level 2 - 20 volts
Outputs	8 x RCA 1 x remote out
Output voltage	6 volts
Frequency response	10 - 22.000 Hz
DSP resolution	56 bits
DSP processing power	2 x 172 MHz
DSP type	Audio signal processor
Number of DSP processors	2
Signal converter	A/D: Asahi Kasei D/A: Cirrus
Digital input signal-to-noise ratio	114 dB
Audio input signal-to-noise ratio	114 dB
Total harmonic distortion (THD)	0,001%
Operating voltage	9,2 - 18 volts (max. 5 sec down to 6 volts)
Dimensions (H x W x D)	190 x 190 x 42 mm

Provide for stable relationships – anyone who wants to experience high-end car audio at the highest level will not be able to avoid having an adequate power supply for the output stages. After all, with all its power fluctuations and interruptions, the electrical network in the vehicle is not exactly the ideal basis for the finest music reproduction. With the XXL Power Station, problems like that are definitely a thing of the past. This product heralds in a new era of power stabilizers to noticeably improve the sound precision and performance of your car audio system.

REVIEW

"The Power Station is a guarantor of the absolute best and most dynamic sound an amplifier can create." (autohifi)

"Frankly speaking, we wonder how high quality car hifi systems could work at all before HELIX invented the Power Station." (Car&HiFi on Power Station XXL)



POWER STATION XXL

High current power stabilizer with digital display for input and output voltage



Features

- Power: 100 amperes continuous current; 200 amperes maximum current
- Processor-controlled switched power supply with maximum efficiency
- Variable output voltage: 12-15 volts
- Battery undervoltage protection: Power Station will be turned off, if input voltage drops below 10 volts for more than one minute
- Detection of input and output current
- Parallel connection of several Power Stations via master/slave mode possible
- Separate voltage sensor input to eliminate voltage drops between the Power Station and the output stage
- Connection of additional power caps (gentle charging via "softstart")
- BUS system connection for external display control
- Delayed remote output to turn on connected amplifiers
- Double-sided, extra strong copper-plated printed circuit board for best possible power and signal transmission
- 24-carat gold-plated power connections for cables up to 25 mm² in width (AWG 4)
- Dimensions (H x W x D): 35 x 432 x 240 mm

Original factory-installed car radios have one big disadvantage, as a rule; they are not equipped with a pre-amp out to drive external amplifiers. But now, thanks to the HELIX high-low converter, that no longer has to mean “the end” for cranking up the power and performance. They generate a clean pre-amp signal from the loudspeaker signal along with a remote signal to switch on the output stages. This creates the foundation for perfect HELIX sound in virtually any vehicle.

REVIEW

“Welcome to the club of highly recommendable signal converters” (autohifi about ACC)



REVIEW

“Its functionality is mature and its design is technically and visually perfect. Let’s start the action and have fun!” (Car&Hifi about the AFC)

AAC

Signal converter for generating preamp signals from high-level speaker signals of the OEM car radio



Features

- Applicable for all head units
- Perfect to tune up built-in factory systems and to upgrade existing car audio equipment
- Generates a stereo preout signal from the speaker signal of the car radio
- Generates a +12V remote signal to turn on connected amplifiers
- Excellent sound quality thanks to wide frequency range (18 – 22.000 Hz)
- Extremely compact and therefore easy to install

AFC

Signal converter for generating preamp signals from high-level speaker signals of the OEM car radio or amplifier

Features

- Applicable for all head units
- Even matches with OEM sound systems that are already equipped with a separate amplifier.
- Generates a preamplifier signal from up to six speaker input signals
- Three stereo outputs (6 channels)
- Generates a +12V remote signal to turn on connected amplifiers
- Excellent sound quality thanks to wide frequency range (10-22.000 Hz)



	AAC	AFC
Maximum speaker input level	16 volts (= 60 watts/4 ohms)	16 volts (= 60 watts/4 ohms)
Maximum output level	5,0 volts	8,0 volts
Output gain	-	+/- 12 dB
Frequency response	18 Hz - 22.000 Hz	10 Hz - 22.000 Hz
Total harmonic distortion (THD)	0.01 %	0.01 %
Input impedance	150 ohms	180 ohms
Current drain	50 mA	200 mA
Max. remote output current	200 mA	1.000 mA
Dimensions (H x W x D)	77 x 37 x 20 mm	162 x 150 x 42 mm

There's almost nothing that can't be improved on if you add the right accessories. Regardless of whether for the power supply or the optimum insulation of the vehicle - Audiotec Fischer has the perfect solution. Don't leave your optimal sound experience up to chance; be sure to choose the tried-and-trusted accessories from the HELIX program.

Power supply

The original from Audiotec Fischer, the inventor of the power cap. This accessory is something that should never be missing in any high-quality sound system. Thanks to their large capacity and minimum internal resistance, HELIX Power caps can provide an enormously high amount of power for a short time to deliver enough energy for the power amps.

REVIEW

"Audiotec Fischer lives up to its name. Thus, there is only one thing left to say: Black is beautiful!" (autohifi about the DPC1000)

DPC 1000

Power cap with a capacity of 1.000.000 μF , digital voltage display and protection circuit against reverse polarity
Diameter: 75 mm
Length: 282 mm / 11,1"



CAP 1000

Power cap with a capacity of 1.000.000 μF ; diameter: 75 mm
Length: 235 mm



CAP 33

Say "good-bye" to interference from the generator. Thanks to its extremely low inner resistance, the CAP 33 high-power capacitor effectively eliminates any annoying whistling. Alternator noise suppression cap with a capacity of 33.000 μF ; diameter: 35 mm
Length: 100 mm



POWER DETECTOR

Digital voltmeter for monitoring the supply voltage

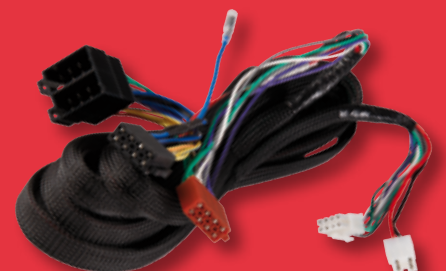


REVIEW

"Silver Bullet!" (autohifi referring to the CAP33)

EASY PLUG CABLE

The optimal wire harness, which dramatically simplifies the connection of additional devices to the factory-installed car radio. Whether it's our active B 8DSP / B 12DSP subwoofers or the P-DSP signal processor – together with the corresponding vehicle-specific adapter and the Easy-Plug-Cable, these devices are provided with power as well as with the four-channel high-level radio signal. Another advantage: There is no remote signal needed, not even to switch the device on. It doesn't get much easier than that!





HELIX
Classic

HELIX

H 4004

Fischer
3900µF ±20%

ADJUSTMENT

GROUND

REMOTE

12V

plug & play

Small is good – with the components in the plug & play series, Audiotec Fischer is blazing new trails in tweaking original sound systems in vehicles to get highest performance with minimum installation effort.

All the products in this line are not only particularly compact in their dimensions, they are also exceptionally easy to connect. Your vehicle stays exactly the same – there's not a single cable that has to be cut or a wire altered to install the miniature powerhouses. Never before has the term "plug & play" been more fitting than it is here – see for yourself!

MATCH

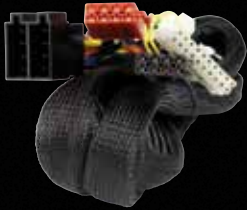


Highlights

- Easiest connectivity to the OEM sound system of more than 2.500 different cars via optional ISO adapters
- Extremely compact
- Immense sound quality improvement thanks to more power and sophisticated DSP technology
- Perfectly matched subwoofers also available
- Completely made from selected components in Germany

Features

- **56-bit DSP technology** based on today's most advanced chip sets (PP20 DSP and PP40 DSP)
- **BurrBrown** A/D and D/A converter
- Upload of car-specific setups via **MicroSD storage card**
- Ready for cars with **start-stop feature** down to 6 volts supply voltage (PP20 DSP & PP50 DSP)
- **AUX inputs** with signal-controlled switching for external sources like MP3-players or portable navigation systems
- **Smart protection circuits** against overheating, over- and undervoltage, speaker short circuiting, low impedance and faulty connection
- **SMD** technology (Surface Mounted Devices) combine minimum space requirements with highest reliability
- Multilayer printed circuit boards for best possible power and signal transmission
- **1% accurate components** for perfect sound quality



PP-ISO 2 (2,2 m plug & play wire harness) and an AUX cable are included in the delivery



Innovative technology on smallest space – the PP-amplifiers



PP50 DSP PC tool
User interface



Extremely compact, powerful and amazingly versatile – it has never been easier to crank up the original sound system in your vehicle with more power. But of course performance isn't everything when it's about breathing more life into loudspeakers that were installed in the factory. That's why the new PP20 DSP and PP40 DSP amps have been equipped with a particularly powerful digital signal processor, which has such an extensive range of options that we have devoted two pages to them in the section entitled "insight" in this catalog.

PP20 DSP

5-channel amplifier with integrated digital signal processor



PP40 DSP

4-channel amplifier with integrated digital signal processor



PP50 DSP

5-channel amplifier with integrated digital signal processor, freely configurable using the optional USB interfaces, AUX input and PP subwoofer output



	PP20 DSP	PP40 DSP	PP50 DSP
Power handling RMS / max.			
- Front/rear channels at 4 ohms	4 x 30 / 60 watts	4 x 35 / 70 watts	4 x 35 / 70 watts
- PP subwoofer at 2 ohms	1 x 160 / 320 (4 x 40 / 80) watts	-	1 x 160 / 320 (4 x 40 / 80) watts
- Front/rear channels at 2 ohms	-	-	4 x 50 / 75 watts
- Channel C/D bridged at 4 ohms	-	1 x 85 / 170 watts (af2 mode)	-
Frequency response	10 Hz - 22.000 Hz	10 Hz - 22.000 Hz	10 Hz - 22.000 Hz
Bass boost	3 dB / 60Hz	3 dB / 60Hz	3 dB / 60Hz
Highpass	50 / 75 / 100 Hz	50 / 75 / 100 Hz	50 / 75 / 100 Hz
Lowpass	50 Hz - 120 Hz	50 Hz - 120 Hz	50 Hz - 120 Hz
Total harmonic distortion (THD)	< 0,022 %	< 0,007 %	< 0,01 %
Signal-to-noise ratio	> 95 dB	> 95 dB	> 103 dB
Damping factor	> 100	> 600	> 100
Input impedance	47 ohms	47 ohms	44 ohms
Dimensions (H x W x D)	42 x 167 x 140 mm	42 x 167 x 220 mm	42 x 176 x 120 mm

It fits! For the optimal use of the integrated PP20 DSP subwoofer amp, Audiotec Fischer offers two different enclosure subwoofers, which, thanks to their compact dimensions, are just as easy to install in the vehicle as the plug & play amps themselves. Their impedance of 4 x 2 ohms gets a rich 150 watts of RMS voltage from the PP20 DSP / PP50 DSP. And we've also thought of the "DIYers" – anyone who wants to build a super-compact subwoofer himself will find exactly what he is looking for with the PP 7W, which are ideally used as a pair.

PP 7W

178 mm / 7" subwoofer with aluminum die cast basket and 2 x 2 ohms dual voice coil, optimized for compact vented enclosures



PP 7E

Compact vented subwoofer, equipped with two 178 mm / 7" woofers with aluminum die cast baskets, impedance 4 x 2 ohms



PP 7S

Spare wheel vented subwoofer with 2 x 178 mm woofers in the die cast aluminum basket, impedance 4 x 2 ohms



	PP 7W	PP 7E	PP 7S
Power handling RMS / max.	100 / 200 watts	200 / 400 watts	200 / 400 watts
Sensitivity	87 dB 1W / 1m	90 dB 1W / 1m	90 dB 1W / 1m
Impedance	2 x 2 ohms	4 x 2 ohms	4 x 2 ohms
Resonance frequency	50 Hz	-	-
Qms	3,04	-	-
Qes	0,41	-	-
Qts	0,36	-	-
VAS	9,4 liters	-	-
Linear cone excursion	+/- 5 mm	+/- 5 mm	+/- 5 mm
Mounting depth	75 mm / 2,95"	-	-
Dimensions (H x W x D)	-	270 x 310 x 290 mm	Ø 500 x 146 mm

Accessories kiss your toolbox good-bye – Audiotec Fischer offers a wide range of complete connection cables and adapters for the products in the plug & play series to make installation quick and foolproof without having to cut, insulate or solder a single wire.. It doesn't get any easier than this!

OPTICAL & USB INTERFACE

The link between PC and amplifier. This USB adapter can be used to configure the PP50 DSP from any PC equipped with a Windows operating system (Windows XP or later). The software required is available for downloading free of charge at www.audiotec-fischer.com. And as if that were not enough, this interface is even equipped with an optical SPDIF input to allow the loss-free feed-in of digital signals into the PP50 (Prerequisite: 48 kHz signal source sampling rate).



PLUG & PLAY ISO ADAPTER

70 different adapters for approx. 2500 different vehicles make installing the plug & play amplifiers child's play without having to cut a single cable in the original vehicle wiring.



BMW
PP-AC 13

SUBWOOFER CONNECTING CABLE

The ideal cable to connect the PP 7E and PP 7S subwoofers to the PP20 DSP / PP50 DSP amplifier. Pole reversal and short circuits are not possible. Cable length 4,8 m



PP-SC 4



Mazda
PP-AC 28



Chrysler
PP-AC 15



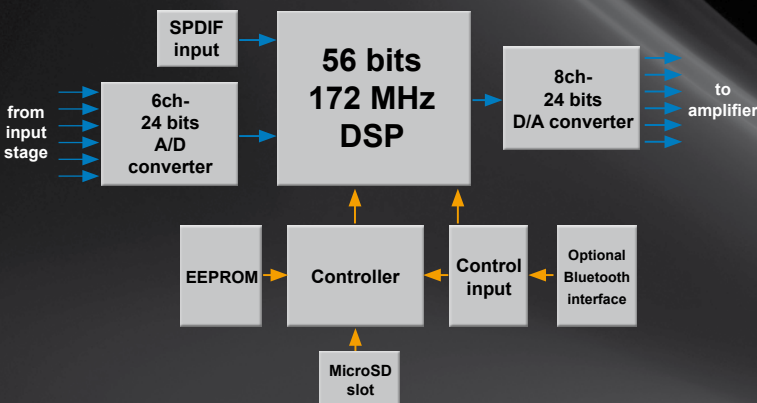
Ford
PP-AC 47

A wide range of adapters allows an easy connection of plug & play amplifiers in all major cars

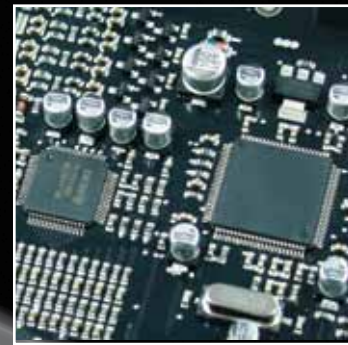
"State-of-the-art" technology

Audiotec Fischer stands not only for "Made in Germany" right from the beginning. It is also a guarantee for unique concepts and technologies of the very finest. The goal of every innovation is to not only improve the products in terms of sound quality and reliability, but to further simplify the operation and installation at the same time. Audiotec Fischer knows how to adapt its products to the rapidly changing requirements in the vehicle better than any other manufacturer. The technologies explained in the following are only a few of the examples.

Digital Signal Processing



DSP is not the same as DSP – the processor quality depends to a large extent on how precisely the music signal is processed internally. The more complex the sound manipulation options are, the higher the signal processing resolution has to be. Without this precision, you end up with quantification noise and distortion. That's why Audiotec Fischer uses only pure audio DSPs that have been developed specifically for this purpose and, thanks to their high resolution of 56 bits, are much superior to conventional multimedia DSPs in terms of sound reproduction.



Load setups using a MicroSD card

All our amplifiers with integrated DSP technology and the P-DSP and C-DSP signal processors offer the option of simply uploading either vehicle-specific set ups (provided by Audiotec Fischer) or creating your own configurations (using our PC tool) via the MicroSD card.

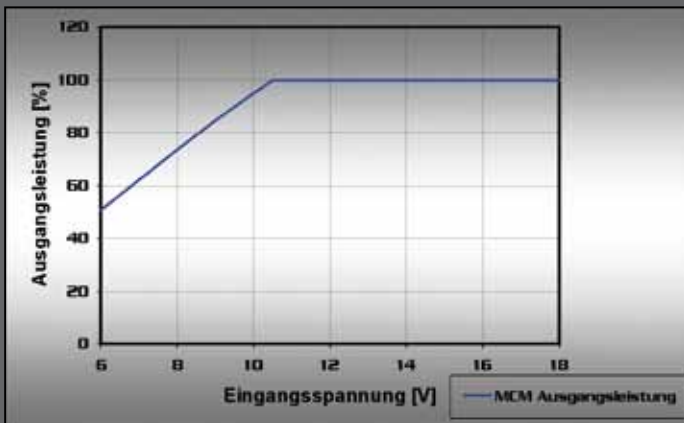
The way that it all works is incredibly easy:

- Copy the desired setup onto any MicroSD or MicroSDHC memory card (memory requirement max. 200 kB).
- Insert the memory card into the amplifier/signal processor and switch it on. After approx. 5 to 10 sec., the download will have finished and the card can be removed.
- You're done!



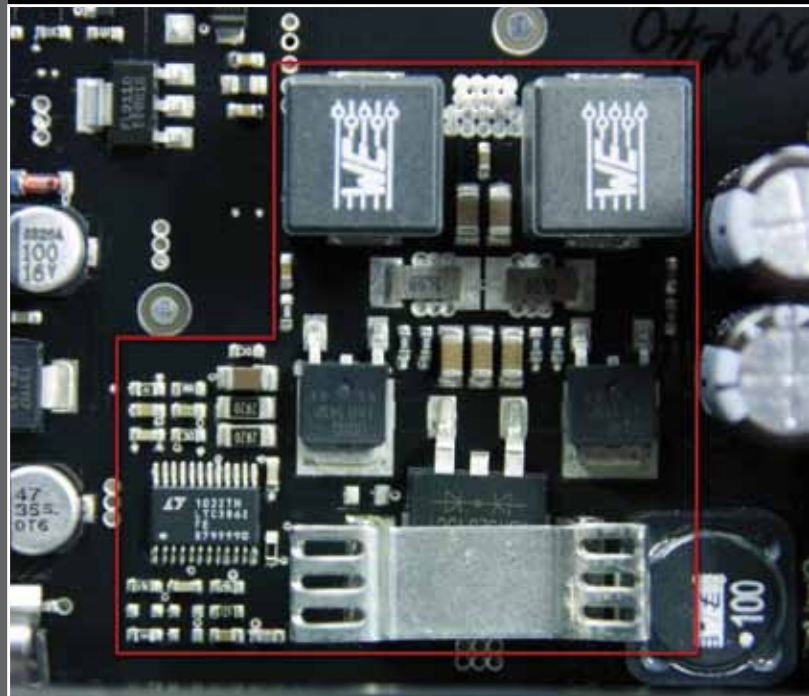
Multiphase Current Mode

It doesn't get much more compact than this – the new MCM (Multiphase Current Mode) switched power supply technology makes powerful DC/DC voltage converters more compact than ever before. A 400-watt power supply, for example, can be fitted onto a space of only 14 cm² on the PCB. Separate cooling is not required due to an impressive sensitivity of approx. 96%.



Curve for the output power depending on the supply voltage

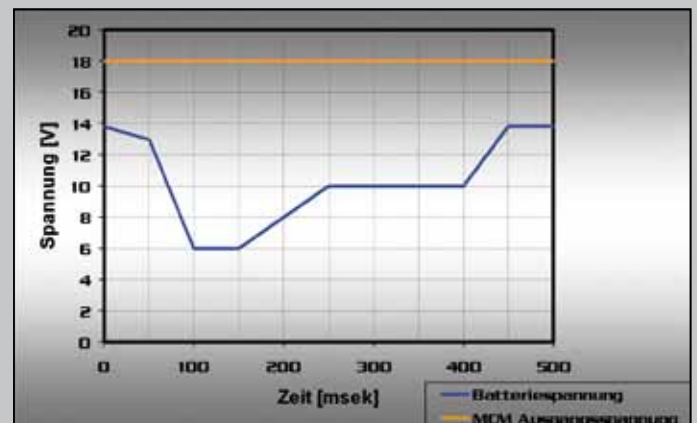
The output voltage remains completely stable, even at input voltages of only 6 volts. An ideal prerequisite for use in vehicles equipped with the start/stop function.



Advantages of MCM technology:

- 100% constant output voltage independent of the supply voltage and the load
- Extremely high sensitivity of approx. 96% – which means there is virtually no cooling needed for the power supply components
- Switching frequency (350 - 450 kHz) considerably farther away from the audio frequency band than for conventional switched power supplies (30 - 40 kHz)
- Most minimal power requirements optimize the overall sensitivity of the amplifier
- Full start/stop capability (from a supply power of 6 volts)
- Drastically reduced footprint on the PCB enables particularly compact designs

Ready for start/stop



Voltage curve when the engine is started

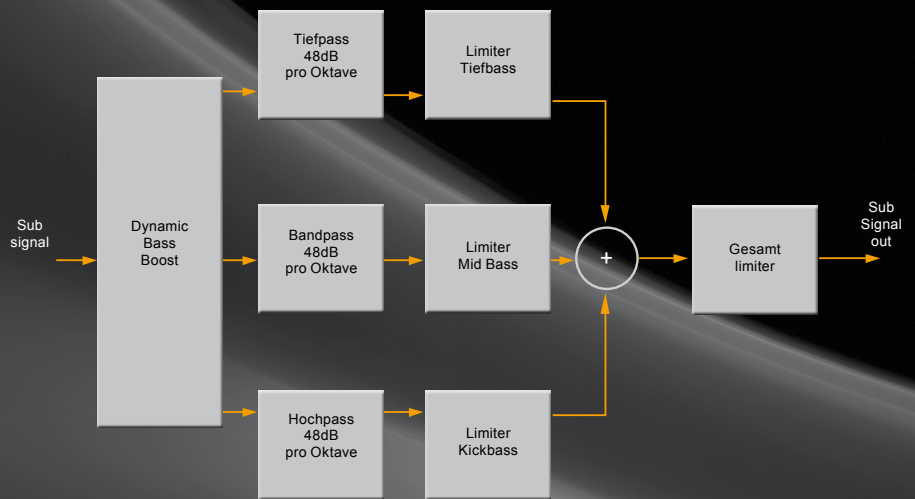
"State-of-the-art" technology

DSP technology leverages not only the plug & play amplifiers to unforeseen possibilities in terms of sound manipulation; it also drives the new B 8DSP and B 12DSP subwoofers to new heights of sound performance. Highly developed signal processing using 56-bit processors ensure that previously incompatible acoustic properties suddenly become reality.

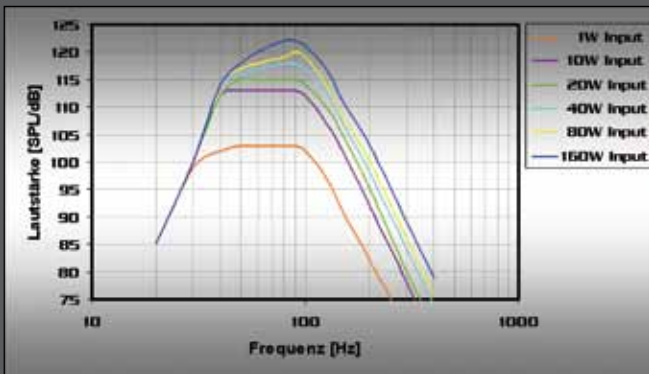
Digital Dynamic Bass Processing

Intelligence outdoes size every time – thanks to the innovative signal processing in our amplifiers and the B 8DSP / B12DSP active subwoofers, it is possible to produce powerful, punchy, undistorted bass sound even in comparatively small systems. To get these results, the music signal for the woofer is divided into two or more frequency ranges steeply separated from one another. Each range is monitored by a separate limiter to actively prevent overloading the loudspeaker connected. The lower frequency range is varied digitally so that the woofer can be operated optimally in every frequency range up to its performance limits without exceeding those limits.

"Digital Dynamic Bass Processing" is so complex in its application that Audiotec Fischer is the only manufacturer who can adapt it individually and precisely to the components used.



Digital dynamic bass processing



Frequency response of the B 12DSP against input power

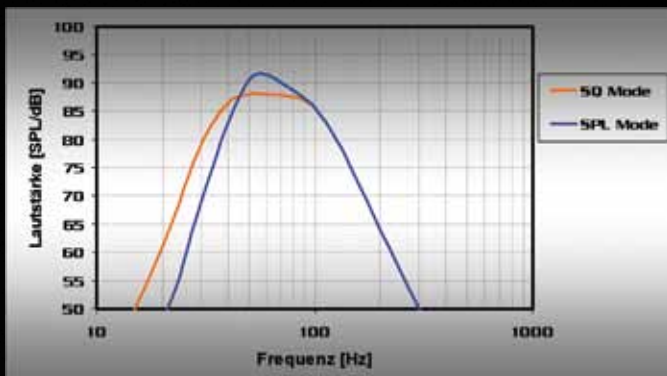
The connector for more bass!

Besides the four speaker outputs for the front and rear channels the PP20 DSP also offers four additional subwoofer channels, which can deliver up to 40 watts RMS into 2 ohms each. The perfect matching subwoofers PP 7E and PP 7S with 4 x 2 ohms impedance complement the plug & play product line.



Two hearts beating in a single breast

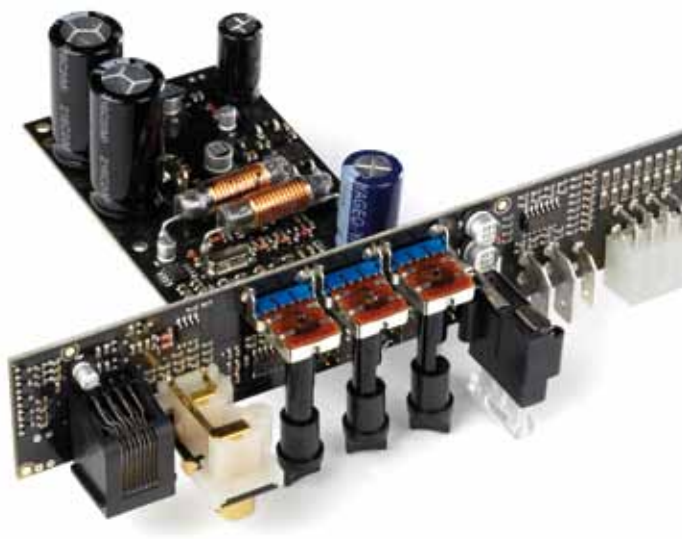
Listening tastes are bound to differ, especially when it comes to bass sound. Some people like a really punchy bass in the upper range, while others prefer a very balanced sound with good bass depth. The new B 8DSP and B 12DSP active woofers will make everyone happy because adjusting the sound to your personal tastes is just a switch away.



- a) "SPL" (blue dashed graph) with more sound pressure level in the area between 60 – 70 Hz on account of deep bass response
- b) "SQ" (orange graph) with flat and extended frequency response and clearly extended deep bass response

"Four instead of two" – the 4-channel preamp input

In contrast to other active subwoofers, the B 8DSP and B 12DSP are equipped with a 4-channel loudspeaker input. This is the only way to guarantee that the levels between the subwoofer and the other loudspeakers remain the same when the fader or balance settings are adjusted for the radio. To keep the connection process as easy as possible, Audiotec Fischer also optionally offers a special cable, which, in connection with the 70 different plug & play adapters, allows for a particularly easy hook-up to virtually any OEM car radio. This cable can also be used to supply the subwoofer with power if there is no power source in the trunk.



High-tech on the inside

The entire electronics, designed to consume a minimum of power, fit onto two extremely compact circuit boards. Two amplifier channels with a total of 150 watts in RMS voltage in efficient "Class SB" technology provide for the controlled drive of the high-excursion subwoofer chassis with a 2 x 1 ohms dual voice coil and solid aluminum die cast basket.



**AUDIOTEC
FISCHER**
INNOVATIVE CAR AUDIO

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