

MATCH UP 7DSP

The UP 7DSP is the most powerful MATCH DSP amplifier and comprises our new ADEP.3 circuitry. It offers seven amplifier channels in total as well as an additional preamp output, which allows – in combination with its integrated 8-channel DSP – to perfectly drive individual and complex speaker configurations. Two of the output channels deliver 160 Watts RMS into 2 Ohms - plenty enough for fuelling even large subwoofers.

But brute force is nothing without "smart control" – that's why the UP 7DSP incorporates a stunning powerful 64 Bit DSP of the latest generation, which enables to realize all-new revolutionary and proprietary sound features like the "Augmented Bass Processing", the "StageXpander" or the "RealCenter" function. Take us by our word – you will experience a truly breathtaking sound performance.

But that's not enough – simply enjoy music from your smartphone in unprecedented quality. The UP 7DSP comes up with a MATCH Extension Card slot (MEC) for additional input and output interfaces like e.g. our Bluetooth® Audio Streaming module or a High Resolution Audio USB sound card.

If the 4 highlevel inputs of the UP 7DSP are not sufficient for your project, you are able to upgrade the amplifier with the MEC ANALOG IN module. This extends the amplifier with two additional analog input channels. This module allows to

- upgrade OEM premium sound systems which require 2 additional highlevel inputs with up to 30 Volts input sensitivity
- provide the amplifier with a lowlevel signal
- connect an additional analog signal source, such as a TV or smartphone

Of course, the additional 2 highlevel inputs provide our proprietary ADEP.3-circuit, the Auto Remote function as well as an adjustable input sensitivity from 1.5 to 30 Volts. Just like the highlevel input the 3.5 mm lowlevel stereo input offers an adjustable sensitivity. The adjustment range is from 0.5 to 8 Volts.

Thanks to our professional and user-friendly DSP PC-Tool software V4 the configuration and set-up of the UP 7DSP is pretty straightforward and intuitive.

Features

- 7-channel Class HD upgrade amplifier with integrated 8-channel 64 Bit DSP for universal applications
- MATCH Extension Card slot (MEC) for additional input / output modules like Bluetooth® Audio Streaming, High Resolution Audio Streaming via USB etc.
- Smart highlevel input with ADEP.3 circuit (Advanced Diagnostics Error Protection) and Auto Turn-On function
- Unique DSP features such as the "Augmented Bass Processing" which dynamically optimizes the bass response of the subwoofer, the "StageXpander" that significantly widens the stereo perspective, the "RealCenter" function, which

allows a perfectly focussed sound staging for both driver and co-driver and much more

- Easy configuration via the intuitive DSP PC-Tool software
- Start-Stop capability down to 6V supply voltage
- Optical input in SPDIF format with sampling rate between 12 and 96 kHz
- Mono RCA output for the connection of an external amplifier e.g. subwoofer amplifier
- Compact dimensions and low heat dissipation thanks to maximum efficiency

Special features

Class HD technology

The UP 7DSP combines the advantages of a Class H technology with the principle of a class D amplifier. The result is an unsurpassed efficiency which easily outperforms any conventional Class D amplifier. By varying the internal supply voltage depending on the amplifier's amplitude of the input signals, idle losses are significantly reduced and overall efficiency is close to maximum at any time.

Smart highlevel input ADEP.3

Modern, factory-installed car radios incorporate sophisticated possibilities of diagnosing the connected speakers. In particular the latest generation of car radios are equipped with additional monitoring functions so that failure messages and loss of specific features (e.g. fader function) quite often appear if an amplifier will be hooked up - but not with the UP 7DSP.

The new ADEP.3 circuit (Advanced Diagnostics Error Protection, 3rd Generation) avoids all these problems without loading the speaker outputs of the OE radio during high volumes unnecessarily.

Start-Stop capability

The switched power supply of the MATCH UP 7DSP assures a constant internal supply voltage even if the battery's voltage drops to 6 Volts during engine crank. If the supply voltage drops below 10.5 Volts for more than five seconds the amplifier goes to "Protect mode" (Status LED lights up red) in order to avoid any further discharge of the car's battery.

Automatic Digital Signal Detection

Switching from analog input to the digital input is done automatically as soon as a signal is detected on the Optical Input. This feature can be deactivated in the DSP PC-Tool software. Alternatively you can use an optional remote control for manual switching between analog and digital inputs.

Power Save Mode

The Power Save Mode is incorporated in the basic setup. It allows to significantly reduce the power consumption of the UP 7DSP and potentially connected amplifiers once there's no input signal present for more than 60 seconds. Please note that in many up-to-date cars with "CAN" or any other internal bus structures it may happen that the radio remains "invisibly" turned on for up to 45 min. even after locking and leaving the car! Once the "Power Save Mode" is active the remote output and therefore the connected amplifiers will be turned off. The MATCH UP 7DSP will reactivate the remote output within a second if a music signal is applied. It is possible to either modify the turn-off time of 60 sec. or completely deactivate the "Power Save Mode" via the DSP PC-Tool software.

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DSP features

RealCenter

The "RealCenter" feature is an algorithm, developed by Audiotec Fischer, that emphasizes the music information which is present in both the left and right front channel to create an unique center signal. In contrast to common procedures, in which only the channels are summed up, the intensity of the center signal is also dynamically controlled by the stereophonic informational content of the left and right channel. Sounds complicated but this effect is astonishing: That means if solely the left or right channel delivers an audio signal, the center channel will not reproduce a signal. In the case of common algorithms, the volume level of the center channel is only reduced by 6 dB (= half volume level). Audiotec Fischer's "RealCenter" allows a unique, broadened sound staging for both driver and co-driver at the same time! Therefore, the disadvantages of a conventional center channel, such as an intrusive, small sound stage, are things of the past.

Augmented Bass Processing

Audiotec Fischer's proprietary "Augmented Bass Processing", consisting of the two revolutionary sound features "Dynamic Bass Enhancement" and "SubXpander", has been especially developed to dramatically improve the bass reproduction of subwoofers. The "Dynamic Bass Enhancement" ingeniously combines maximum deep bass and highest sound pressure – regardless of the music style or the tone controls in the head unit. Depending on the input signal, the "Dynamic Bass Enhancement" gains the lower frequency range and varies the cut-off frequency of the subsonic filter. The result is a significantly more powerful and deeper bass response at low and medium volume levels without the risk of overloading the subwoofer neither mechanically nor electrically at high volume levels. It is simply fascinating which bass performance is suddenly possible. If you want an even lower and "darker" bass reproduction, the "SubXpander" can be additionally activated. Therefore, subharmonic tones are added to the fundamental tones in the frequency range between 50 and 100 Hz.

StageXpander

Depending on the speaker arrangement in the vehicle, a more or less wide stereo sound stage can be created on the front seats. A center speaker may limit the spatial reproduction of the music additionally. This is where Audiotec Fischer's new "StageXpander" comes into play – a sound feature which seems to break the acoustic limitations and thus allows to create a way broader stereo base without negatively affecting the precision of the localization of voices or instruments!

The effect can be adjusted according to your personal preferences in four steps.

ClarityXpander

You are looking for more transparency and substance in the treble reproduction? With the "ClarityXpander" Audiotec Fischer is now offering the right tool. Properly adjusted (and therefore selectable in three steps) the feature adds additional harmonics in the upper frequency range – this is especially useful if the original speakers lack some brilliance in the treble response. The extra treble-kick is not only available for the two front channels but also separately adjustable for the center channel. Even better – the center channel allows to activate an automatic and dynamic control so that music with "loads" of treble doesn't fatigue your hearing.