decoderstation 3

Teufel

Original packaging
We recommend that you keep the packaging if you want to use the eight-week right of return because we can accept the loudspeakers only IN THEIR ORIGINAL PACKAGING. Empty boxes are not available.

Technical data
Technical data can be found in the product description on our web site at:
www.teufel.eu

Contact
Please contact our service department if you have any questions, suggestions or if there is anything you think we could do better.
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www.teufel.eu

Contents

Safety information

In case of emergency:
If any of the following occur disconnect the appliance from the mains and consult our technicians:

- if the plug or cable is damaged,

- if foreign bodies or liquid have entered the appliance,

- if the appliance has been in direct contact with rain or other water,

- if the appliance does not play, even if you have followed the instructions for use,

- if the appliance has been dropped or damaged in some other way.

We cannot accept any responsibility for incidences that occur by customers' not adhering to safety information.

Important: Please read through these operating instructions very carefully. It is essential that you take note of all of the safety information and operating instructions before switching on the appliance. Please keep these operating instructions in a safe place for future reference.

Important: Please read the operating instructions. You should then also follow all instructions for start-up and ongoing use.

Information on cleaning: Please do not attempt to clean the appliance using household chemicals because they could damage its surface. Simply use a dry cloth. Disconnect the appliance from the mains before cleaning.

Caution - moisture and sunlight: Never operate the appliance in damp areas, i.e. near bathtubs, showers, washbasins or drains or in damp cellars or by swimming pools. Basically never operate the appliance where there is moisture. Never expose the device to high humidity and do not place it in direct sunlight.

Information on location: Do not use the appliance unsecured in vehicles, in unstable places, on wobbly tripods or furniture or supports that are too small. The speakers could fall and cause damage to people, including yourself. The appliance must not be placed near sources of heat. This includes radiators and heaters, ovens and other appliances that emit heat (e.g. amplifiers). No sources of heat may be placed on the appliance e.g. fan heaters or candles.

For ventilation: Any slits and openings in the casing have been provided for ventilation. Their purpose is to guarantee reliable operation and to prevent the appliance from overheating. These openings must not be blocked or covered, including by placing the appliance on a bed, sofa, carpet or any other soft surface. Do not place newspapers or tablecloths, etc. on the appliance. The cooling plate of the amplifier electronics must not be covered or exposed to direct sunlight in any event. Additional active cooling of the appliance is generally not permitted.

Information about electricity supply: The appliance must only be supplied from a power source with the correct voltage, as specified on the identification label. If you are unsure about the electricity supply in your home, please contact us or your electricity supplier for more information. The appliance does not need to be earthed. Please only use the appropriate mains plug for connecting to the mains socket. This mains cable must not be modified under any circumstances. Regulations on polarity and earth connection must be adhered to.

Information on wiring: Please place the supply cable flat and flush to the wall and floor. Cables that are laid loosely present a trip hazard. This could also result in interference and cause the sound to be disrupted. The electricity supply cable should be laid so that it is not likely to be stepped on or squashed from the sides or above by heavy objects. Damaged cables must be replaced. Pay particular attention to the cable/plug connection, the mains socket and the cable output from the subwoofer. If a fault is discovered, the appliance and the cabling must be disconnected from the mains immediately and the defective cable must be replaced.

During periods without use: Remove the appliance's power supply cable from the socket during longer periods of absence or non-use.

During thunderstorms: In order to avoid damage caused by lightning strikes, the appliance should be switched off and also detached from the mains socket as soon as a thunderstorm is expected.

Risk of overload: You should not overload wall sockets, extension cables or integrated appliance sockets, because this could potentially lead to short circuits and even fires. Avoid turning up the volume control very high even when using a compatible amplifier.

Foreign bodies and liquids: Foreign bodies and liquids must not get into the appliance via its openings under any circumstances, because they could come into contact with parts carrying high voltage, which could then cause short circuits and fires. Therefore do not spill any liquids of any kind on the appliance.

Troubleshooting: Do not attempt to repair the appliance yourself. Contact our service department first for authorisation if you think that you can repair the fault yourself. Otherwise the appliance must be sent in for testing.

Information on spare parts: Lautsprecher Teufel will provide you with spare parts during the warranty period. Your warranty will not be invalidated if you replace the parts yourself on-site using Lautsprecher Teufel spare parts.

Unusual sounds: If any unusual sounds occur during use or the sound becomes distorted, the speaker output must be reduced immediately so that the system plays a clear sound.

Connecting and changing the fuse: Disconnect the mains plug. A faulty fuse may only be exchanged for one of the same type.

Information on volume: Very high volume can damage hearing. Sudden high sound pressure may be created, particularly if a subwoofer in "Standby/Auto On" mode is switched on by a bass impulse at full volume. In addition to physical damage, please be aware of possible psychological consequences. Children and pets require particular care. If necessary, set the volume control of your signal source appliance to the lowest level. When the volume is high always keep a certain distance from the appliance and never have your ears right next to the speaker.

Lautsprecher Teufel decoderstation 3

Dear Lautsprecher Teufel customer,
Thank you for buying the decoderstation 3 from
Lautsprecher Teufel.

You have bought a very high quality decoder,
because Teufel appliances are fitted with high
quality components and have been carefully
made.

Please read the instructions carefully before
starting up the appliance and keep them in a
safe place for future reference. If you have any
further questions please contact our engineers
on + 49 30 -300 9 300 or use the email contact-
form on our website www.teufel.eu. Please have
your invoice number ready so that we can deal
with your query as well and as quickly as possible.

Before contacting us with a question, please
read these instructions carefully and visit our
web site at www.teufel.de, where you can find the
answers to lots of questions in the "FAQ/Sup-
port" area.

Please refer to our safety information on page 4
of these operating instructions and only use the
Teufel appliance once you have read the safety
information.

Please take a note of the serial number that can
be found on a sticker on the box) and the invoice
number here:

My **INVOICE NUMBER** is:

. . . .

My **SERIAL NUMBER** is:

. . . .

The Serial number and the invoice number make
it easier for us to process your request quickly if
you require service.

*Please make a note of
the serial number
and invoice number*

Unpacking

Fold the flaps on the top of the box outward, remove the polystyrene and carefully lift the appliance out of the box.

For your own benefit we recommend that you do not dispose of the box, in order to guarantee safe transport if the appliance requires servicing later on.

Contents

▸ 1 x decoderstation 3

▸ 1 x Infra red remote control

▸ 1 x Batteries for the remote control

▸ 1 x Optical digital cable

▸ 1 x Power pack

▸ 1 x Mains cable

▸ 1 x Operating instructions

You can order the optional attachments shown from Teufel online: www.teufel.eu

Accessories (optional)

Mono-cinch cable
You can connect the decoderstation 3 to a coaxial digital outlet using the mono cinch cable available from our online shop.

Optical fibre (Toslink)
You can connect the decoderstation 3 to an optical digital outlet using the optical fibre cable available from our online shop.

Equalisation measuring device
The equalisation measuring device also available from our online shop allows the decoderstation 3 to be precisely equalised. We advise using a gauge measuring device because you cannot achieve a similarly good result by equalising the levels by ear.

Teufel Y adapter cable
The first choice for sound connections from PC or portable CD or MP3 players to the decoderstation 3. Connection to almost any sound card is ensured by using the thin plug on the 3.5mm jack. Available in 1.5-metre, 2.5-metre and 5-metre lengths.

Information about the decoderstation 3

decoderstation 3 is a stand-alone decoder that can be used to process audio signals from analogue and digital sources.

decoderstation 3 not only allows you to switch between different signals, but can also give them e.g. DSP effects to optimise the surround sound experience of stereo sources. The mode of operation of the decoderstation 3 can generally be specified depending on the respective signal source:

Digital signal sources

decoderstation 3 can decode digital signals and make them available to other devices using the integrated analogue 5.1 multi-channel output. This function mainly affects digital sources such as DVD players that can transfer their digital soundtrack using the appropriate media (e.g. film DVDs). Digital signals can be transferred via the optical and coaxial connections of the decoderstation 3.

Analogue signal sources

Analogue stereo signals that are only present on two channels can be emitted in different surround modes with the decoderstation 3. Other surround-sound effects can be added via the integrated DSP, in addition to the Dolby Pro Logic II-Format encoded in the stereo signal. This also allows effective multi-channel reproduction of all stereo sources. The decoderstation 3 also offers ample connection options for stereo sources. A total of three stereo Cinch inputs are available to connect to the same number of stereo sources.

In addition, the comprehensive setting options of the decoderstation 3 allow perfect equalisation of the speakers and audio adjustment for your individual loudspeaker settings.

The decoderstation 3 is an ideal appliance for anybody who wants to operate a fully functioning loudspeaker kit without missing out on the comprehensive features that are otherwise only offered by receivers.

Care instructions and cleaning

In order to enjoy your Lautsprecher Teufel product for as long as possible, please follow the tips below:

Do not expose the casing to direct sunlight. Avoid extreme fluctuations in temperature and protect it from damp.

Please only use a lightly dampened or dry cloth to clean the decoderstation 3. Abrasive products or products that contain alcohol should be avoided.

Display
The decoderstation 3 display is on the front top edge. Various adjustment parameters can be shown on this two-figure display.
During operating, the display always shows the signal source – "01" and "02" (optical inputs), "C0" (coaxial input) and "A1", "A2" and "A3" (analogue inputs). This display will change if you make any changes, e.g. volume and then show the change you have made.

Standby
The standby LED lights up to show that standby mode is activated. The standby LED does not light up if the mains plug has been disconnected or the device is in operation.

Dolby Digital/DTS · Dolby PLII · DSP
Using these three types of reproduction the LEDs show the current operating mode. It should be noted that only digital sources with the corresponding AC-3/DTS digital soundtrack can be reproduced via the integrated digital decoder. Only Pro Logic or DSP are available for analogue stereo sources or digital formats that are not present in AC-3 or DTS.

Volume
Use the dial control to increase or decrease the volume by increments of 1dB (decibels) each. The current volume setting can be seen on the display. Volume can range between "00" (mute) to "80" (maximum level). In the second mode, the control can be pressed to select the signal source.

Optical 1
For connecting the decoder with a digital signal source in optical format (Toslink). The decoderstation 3 is supplied with a suitable optical cable.

Function: Decoder rear

Optical 2
For connecting the decoder with a digital signal source in optical format (Toslink). The decoderstation 3 is supplied with a suitable optical cable.

Coaxial
For connecting the decoder with a digital signal source in coaxial format (cinch).

Aux 1 · Aux 2 · Aux 3
You can connect the stereo cinch cable (left /right) to connect with the analogue outputs of your stereo reproduction appliances (e.g. TV set, CD player, video recorder etc.). You will need an extra preamplifier to connect and operate a record player.

5.1-Channel Output
A decoded analogue multi-channel sound signal is emitted via an analogue 5.1-output. Alternatively you can also use the output for the left and right front channels for reproduction in stereo. A cinch cable is required per channel to connect to an external appliance (e.g. a subwoofer with multi-channel input), i.e. a total of six mono cinch cables or three stereo cinch cables.
FL: Sound output of left front channel
FR: Sound output of right front channel
SL: Sound output of left surround channel
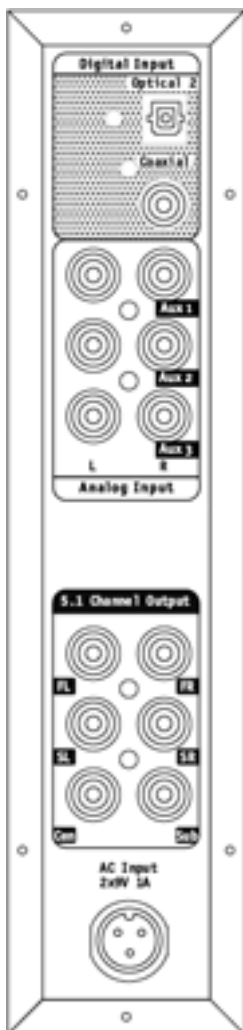**SR:** Sound output of right surround channel
C: Sound output of centre channel
SW: Subwoofer output
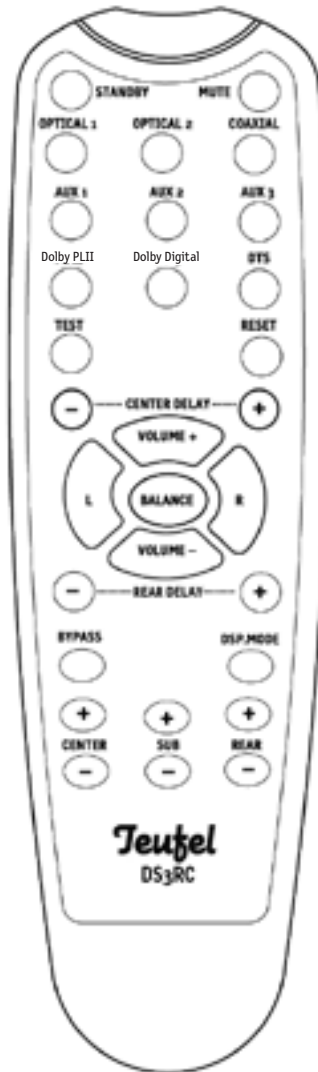(The subwoofer output reproduces the frequency area below 130Hz).

AC input
For connecting the power pack supplied. Use the screw fastening to prevent it from slipping out.

Specification of the connections on the back of the decoderstation 3 and their functions.

Standby
Switches the decoder from active operation into standby mode (press once) or back into active operation (by pressing again). Standby mode is displayed when the standby LED lights up on the decoder station.

Mute
Immediately mutes the decoder. Pressing the button once mutes the system immediately. Pressing it again switches the decoder to the previously selected level.

Optical 1
Selects the optical digital input on the front of the decoder as a reproduction source.

Optical 2
Selects the optical digital input on the rear of the decoder as a reproduction source.

Coax
Selects the coaxial digital input on the rear of the decoder as a reproduction source.

Aux 1 · Aux 2 · Aux 3
These buttons each select one of the three analogue inputs on the rear of the decoder as a reproduction source.

Dolby PLII
Using this button you can reproduce analogue stereo reception in Dolby Prologic II-5.1 mode.

Dolby Digital
For reproduction in Dolby Digital for appropriately coded sound tracks. Please note: Reproduction of AC-3 (Dolby Digital) is only possible with digital sources (i.e. optical 1/2 or coax).

DTS
For reproduction in DTS for appropriately coded sound tracks. Please note: Reproduction of DTS is only possible with digital sources (i.e. optical 1/2 or coax).

Test

After this button has been pressed, the de-coder produces a test signal for equalising the loudspeakers. The test tone is then emitted from each loudspeaker in turn (see p. 14 – equalising the connected loudspeakers).

Reset

Call up the decoder's factory settings using this button. Please note: Pressing this button will delete all of the current active settings (volume, delay and balance)!

Centre Delay

Time delay setting options for the centre loud-speaker (only effective in Dolby Digital/dts mode).

L (left) · R (right) · Balance

The buttons "L" and "R" reduce the respective amounts of equalisation of the left ("L") or right ("R") front loudspeakers. Pressing the "Balance" button will return the equalisation to the original balanced state.

Volume +/–

Increase and decrease the total volume by individual dB. The current settings are shown in the display on the front.

Rear Delay

Allows the time delay of the rear loudspeaker to be set. Only works with Dolby Digital/dts and Dolby ProLogic II.

Bypass

By pressing this button the next signal is only emitted via the two front channels by Downmix. The bypass can be deactivated again by selecting another mode.

DSP mode

Allows the DSP mode for different surround sound effects to be selected. You can scroll through the various modes (theatre, cinema and music) by repeatedly pressing on the "DSP" button.

Centre

Use the [+] and [-] keys to regulate the required levels of the centre loudspeaker. The level can be set in steps of +/- 1dB (decibel) each.

Rear

Use the [+] and [-] keys to regulate the required levels of the left and right rear loudspeakers. The level can be set in steps of +/- 1dB (decibel) each.

Sub

Use the [+] and [-] keys to regulate the required levels of the subwoofer. The level can be set in steps of +/- 1dB (decibel) each.

Inserting or changing the batteries.

With the decoderstation 3, all of the settings can be made simply by remote control. Activate the decoder using the "standby" button of the remote control. Choose the required input using the selection buttons on the remote control.
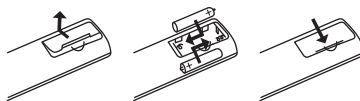
If the appliance no longer reacts to the remote control, even when it is used in direct proximity to the decoder, please change the batteries.

Please note:

■ Do not combine new and old batteries
■ Do not use different types of batteries
■ Observe polarity – see markings in the battery compartment

Example allocation of inputs and outputs of the decoderstation 3

* Allocation of the three analogue stereo inputs can be freely varied, e.g. the audio output of a TV set can also be operated on AUX 1 (example: video recorder).

Digital Input
Optical 2

PC sound card

Coaxial

DVD player / recorder

Aux 1

Video recorder *

Aux 2

CD player / recorder *

Aux 3

MP3 player *

L   R

Analog Input

5.1 Channel Output

FL   FR

Active subwoofer with 5.1 input

SL   SR

Cent   Sub

**AC Input
2x9V 5A**

Games console

Power pack
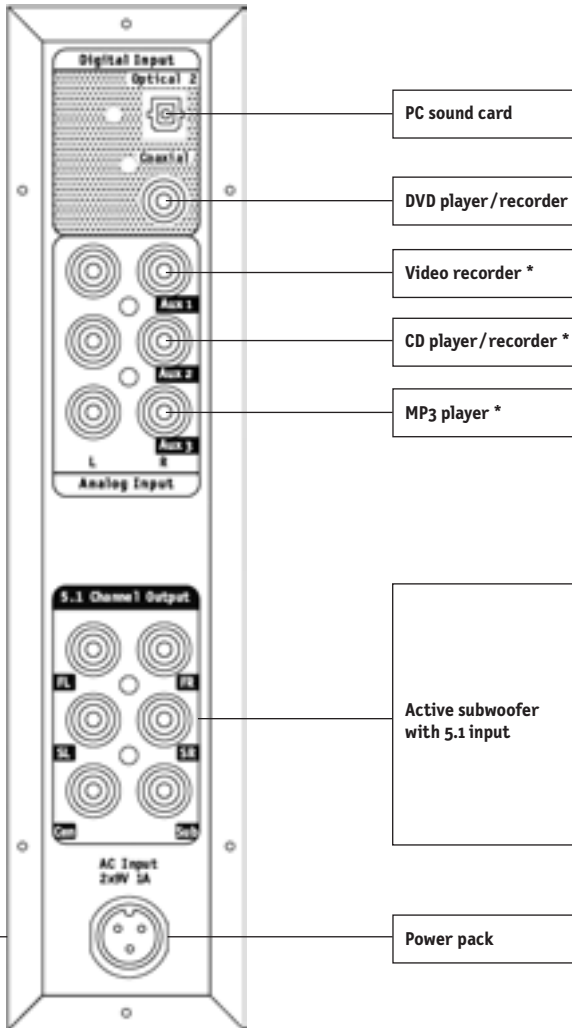
Connection to optical 1 on the front of decoderstation 3.

Connection

The decoderstation 3 is perfect for combining with a total of three appliances, via a digital audio output. You can connect this appliance via its digital output using the required cable to the appropriate coaxial/optical input of the decoderstation 3.

In addition to the coaxial and optical input on the rear of the decoder, there is an additional optical input on the front of the decoder. The decoder automatically recognises the signal transferred via the digital input, decodes the data flow and changes it into a stereo or multi-channel signal.

Connection to one of the two optical digital inputs.
E.g. sound cards with digital output, CD player, DVD player/recorder, sat. receiver and games console.

Use an optical digital cable (Toslink) to connect appliances with optical digital output. The decoderstation 3 comes with a cable of this type. Before connecting the optical digital cable you must first remove the protective cap of the optical fibre on the cable and on the connection jacks.

Connection to the coaxial digital input.
Use a cinch cable for connecting appliances with coaxial digital output. The mono cinch cable supplied by Teufel as an attachment is perfectly suited to this. Connection is also possible using stereo cinch cables. Care should be taken to ensure that the coaxial digital connection only requires a single connection and therefore only one channel of the stereo cable is used, while the other channel remains free.

3 analogue signal sources can also be connected.

Connection of signal sources with analogue outputs.
E.g. stereo sound cards, MP3 player, TV set, CD player and video recorder.

In addition to the digital inputs, the decoderstation 3 also has a total of three analogue inputs. These can be used with the analogue appliances of your choice. Either a stereo cinch cable or a 3.5mm mini-jack-Y adapter cable is required per appliance (e.g. for connecting to the PC sound card).

When connecting the appliances, please note the relevant information in the handbooks for the components used.

Setting the surround decoder

1. Equalisation

Before familiarising yourself with the other functions of the appliance, we recommend that you undertake a basic equalisation of the volume of the connected speakers*. The aim of this equalisation is to set the same volume level for each of the channels at the listening position. This is the only way to achieve harmonious and balanced reproduction of the various channels.

Make sure you are in the best and most central place possible for listening. Press the "standby" button on the remote control and the decoder-station 3 will be ready for use. Make sure that all signal-emitting appliances, any DVD players connected, are not active. Choose a value of "60" for example as a reference master volume.**
The aim: Set the levels of the centre, sub and rear in relation to the output level set on the front speaker.
Now press the "test" button. This activates a test tone that runs through the five satellites and the subwoofer in sequence. Now you can increase and decrease the levels for the centre, both rear loudspeakers and the subwoofer using the remote control, until you can keep these four speakers at the same volume as the two front boxes.

Equalisation by ear requires a few attempts and does not always provide perfect results first time. For perfect equalisation of the loudspeakers we recommend using a volume level measuring device, available in the Teufel shop. This appliance is a purchase that will last a lifetime and allows considerably more precise equalisation than the ear. Bass levels primarily are often set too loud - exact adjustment is only guaranteed using a measuring device.

Note: The volume settings of the subwoofer may differ slightly in reproduction of music compared with home cinema sound, depending on the quality of the recording and the mix. While a large proportion of bass tones may often dominate in effect-rich DVDs, the required level may be partly unheard in the musical area (in particular if the kit has been adjusted to optimal DVD reproduction). Above all, personal taste is essential for the best compromise between the two sources. You can directly adjust the subwoofer level as required using the buttons "SW [+] and [-]" on the remote control. Press the "test" button again to complete the calibration process.

2. Adjusting the time delay ("delay")***

In order for the appliance's digital signal processor (DPS) to be able to convert Dolby and dts signals perfectly, it must be informed of the spatial positioning of the individual boxes to each other. By setting the display it is possible to balance runtime differences between the various loudspeakers using a signal delay, so that the signals come from all loudspeakers to the listening position at the same time. The "centre delay" and "rear delay" settings on the decoderstation 3 remote control are used to make these settings.

The correct delay time is calculated as follows: Centre Delay***

1. Measure the distance between the listening point and the front boxes.
2. Measure the distance between the listening point and the centre box.
3. Subtract the distance from the centre box from the distance from the front boxes.
4. Multiply the result by 3.
This gives you the delay time in milliseconds.

Example

Distance to the front boxes = 3.5 metres, distance to the centre box = 2.5 metres. Subtraction of the distances equals $3.5 - 2.5$ metres = 1.0 metre. Multiplied by 3 this results in 3ms delay time.

Rear delay of the rear speaker***

1. Measure the distance between the listening point and the front boxes.
2. Measure the distance between the listening point and the rear boxes.
3. Subtract the distance of the front boxes from the distance of the rear boxes.
4. Multiply the result by 3, giving the delay time in milliseconds.

Example

Distance to the front boxes = 3.5 metres, distance to the rear boxes = 1.5 metres. Subtraction of the distances equals $3.5 - 1.5$ metres = 2.0 metres. Multiplied by 3 this results in 6ms time delay. As it is only possible to set the rear delay in increments of 5ms, select the next possible value, i.e. 5ms.

Frequently asked questions

"The rear satellites and / or centre will not play with stereo sources e.g. reproduction of music CDs (e.g. via PC or DVD player)".
Use the remote control to switch the decoder into Pro Logic mode or into one of the DSP modes.

"The decoder reacts to the remote control of another appliance / another appliance reacts to the decoder's remote control".
Because there are no basic rules on frequency distribution, any manufacturer can work with the code of his choice. Unfortunately in some cases overlaps occur which regrettably cannot be avoided. This situation does not mean that the decoder is defective.
However, if you have enough space and can place the decoder beyond the range of the remote controls of other appliances (and not right next to them), the situation might improve because the reception areas will no longer overlap.

"The decoder does not respond perfectly to the remote control"
The batteries may have been inserted incorrectly or they may be flat, so they may need to be inserted correctly or replaced. The mode of operation could be impaired if the decoder is situated too far away or in direct sunlight.

"It is not possible to connect a 6.1 or 7.1 loudspeaker kit to the decoderstation 3."
The decoderstation 3 is a 5.1 decoder and is therefore not able to decode a sixth channel (rear). 6.1 or 7.1 operation is therefore not possible.

"No AC-3/DTS multi-channel tone is given via the digital sources connected".
When reproducing the digital sources, the appropriate mode (AC-3/DTS) has to be active on the decoder. You can select it using the remote control. If the decoder still does not play a multi-channel tone, there is most probably no corresponding 5.1 signal. The settings of the connected tone source should be checked to see whether a 5.1 signal is actually being produced. Digital signal sources do not essentially have to transfer multi-channel tones, but also cannot emit any regular stereo tones (2.0) - which is frequently the case for television reception with digital receivers, for example.

"With computer games no multi-channel signals are emitted via the digitally connected sound cards".
Lots of sound chips are able to create surround sound in real time and emit via the analogue outputs on the sound card. However, for transfer using a digital connection, digital encoding of the multi-channel tone calculated is necessary in an AC-3 stream. Direct decoding (i.e. splitting of the signal into its analogue components) can only be carried out if the sound card is able to carry out this decoding in real time and transfer it to the decoder.
Currently only games consoles, such as Microsoft Xbox 360 and Playstation 3 and a few sound cards with Dolby® Digital Live support are able to carry out real time encoding.

Teufel

Please contact our service department if you
have any questions, suggestions or if there is
anything you think we could do better.

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