T+A

USER MANUAL

Caruso Blu

Welcome.

We are delighted that you have decided to purchase a **T+A** product. With your new *Caruso* ᴮˡᵘ you have acquired a top-quality piece of equipment which has been designed and developed with the wishes of the audiophile music lover as absolute top priority.

The *Caruso* ᴮˡᵘ is a multi-source device which provides facilities for playing BluRay, DVD, CD, VHF tuner, DAB+ (digital radio) and Internet radio. It also offers connection facilities for analogue and digital input signals, and can be expanded to form a 3.1 system when used in conjunction with active loudspeakers.

This system represents our very best efforts at designing practical electronic equipment incorporating solid quality, user-friendly operation and a specification and performance which leaves nothing to be desired.

All these factors contribute to a piece of equipment which will satisfy your highest demands and your most searching requirements for a period of many years. All the components we use meet the German and European safety norms and standards which are currently valid. All the materials we use are subject to painstaking quality monitoring.

At all stages of production we avoid the use of substances which are environmentally unsound or potentially hazardous to health, such as chlorine-based cleaning agents and CFCs.

We also aim to avoid the use of plastics in general, and PVC in particular, in the design of our products. Instead we rely upon metals and other non-hazardous materials; metal components are ideal for recycling, and also provide effective electrical screening.

Our robust all-metal cases exclude any possibility of external sources of interference affecting the quality of reproduction. From the opposite point of view our products' electro-magnetic radiation (electro-smog) is reduced to an absolute minimum by the outstandingly effective screening provided by the metal case.

Our range of accessories includes high-quality cables and connectors

We would like to take this opportunity to thank you for the faith you have shown in our company by purchasing this product, and wish you many hours of enjoyment and sheer listening pleasure with your *Caruso* ᴮˡᵘ .

T+A elektroakustik GmbH & Co KG

⚠ **The operation instructions, the connection guidance and the safety notes are for your own good - please read them carefully and observe them at all times. The operating instructions are an integral part of this device. If you ever transfer the product to a new owner please be sure to pass them on to the purchaser to guard against incorrect operation and possible hazards.**

CE All the components we use meet the German and European safety norms and standards which are currently valid. This product complies with the EU directives. The declaration of conformity can be downloaded from **www.ta-hifi.com/DoC**.

Contents

About these instructions

All the controls and functions of the *Caruso* Blu which are frequently used are described in the first section of these operating instructions.

The second part - **'Basic settings, Installation, Using the system for the first time'** covers connections and settings which are very seldom required; they are generally required only when the machine is set up and used for the first time. Here you will also find a detailed description of the network settings required for connecting the *Caruso* Blu to your home network.

For newcomers to networks we have prepared explanations of some of the important terms used in this technology and other background information in the Chapter **'Network Terminology'**.

Symbols used in these instructions

⚠ **Caution!**
Text passages marked with this symbol contain important information which must be observed if the machine is to operate safely and without problems.

ⓘ This symbol marks text passages which provide supplementary notes and background information; they are intended to help the user understand how to get the best out of the machine.

$\mathcal{Caruso}$ Blu Multi-Source System
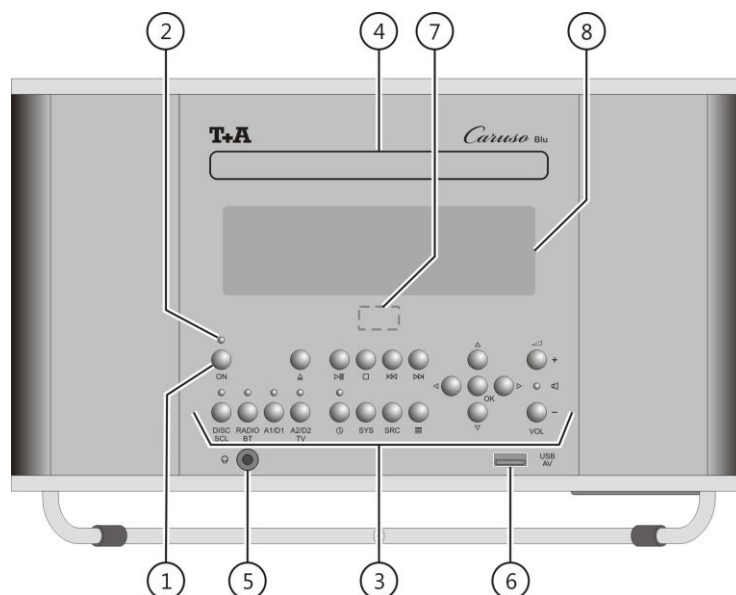
Controls

All the $\mathcal{Caruso}$ Blu's important functions can be operated using the buttons on the machine's front panel. Direct operating buttons are provided for basic functions such as selecting sources and tracks, whereas more rarely required functions are controlled by means of menus which are called up using the (SRC) and (SYS) buttons.

The integral screen constantly displays all the information relating to the machine's current state, the track currently playing and the radio station currently tuned. The main item of information is emphasised on the screen in a context-sensitive manner, so that you can see it clearly from a distance. The following section describes the functions of the front panel buttons and the screen information in greater detail.

① On / Off switch

|	
(ON)	(**On and Off switch**) A brief press on the (ON) button switches the machine on and off.
⚠	<u>Caution!</u> **The ON button is not an isolation switch. Certain parts of the machine remain connected to mains voltage even when the screen is switched off and dark. If you know you will not be using the machine for a long period, we recommend that you disconnect it from the mains by withdrawing the mains plug from the wall socket.** **Please see the chapter entitled 'Notes on Energy Saving' for details of power consumption.**
Slumber-function	The machine has a slumber function that switches it to standby after a selectable time interval between 15 minutes and 2 hours. This selection can be done in steps of 15 minutes.
Activate slumber function	While the $\mathcal{Caruso}$ Blu is powered up keep the (⏻) key of the remote control or the (ON) key of its front panel pressed until the display shows the slumber time.
Change the slumber time	While the slumber function is active the slumber time can be modified in steps of 15 minutes using the (◄) / (►)-keys. Any change comes immediately into effect.
Turn off slumber function	While the slumber function is active it can be turned off by keeping one of the keys (⏻) or (ON) pressed until the displaying of the slumber time is not shown any longer on the display. Alternatively the slumber function is also ended when the $\mathcal{Caruso}$ Blu is switched off.
ⓘ	As long as the slumber function is active there is no other user operation possible besides the functions mentioned above and the changing of the volume.

Status LED	The Status LED glows in different colours to indicate various operating states. These are as follows:	

LED colour	State	Note
Off	Standby mode 'OFF' (lowest power consumption)	The *Caruso* Blu Can be switched on using the **FM100** remote control or by pressing the ⬭ON button on the Front
Red	Comfort standby	Clock display, alarm timer, automatic auto power-on function is possible and automatic clock setting by RDS signal
	App standby	As Comfort stand-by, but can also be switched on using the **T+A Control APP**.
Blue	*Caruso* Blu is turned on	All functions are available

ⓘ Information and possible configurations relating to the selected stand-by mode can be found in the chapter entitled
"**Connections, using the system for the first time / System settings**".

③ **Operating buttons**

Source select	Brief Pressing the buttons selects the desired listening source. Press the button repeatedly until the desired listening source appears on the screen. An LED is also located above each source; the LED lights up in a different colour according to the source you have selected.
Disc / SCL	Selects the Disc (Blu ray, DVD, CD and front USB / AV) or the Streaming Client function (Internet Radio, USB audio on the rear side, access to music server)
Radio / BT	Selects the FM Tuner, DAB+ or the Bluetooth function (playback from tablets, mobile phone etc.)
A1 / D1	Selects the analogue A1 or digital D1 input
A2 / D2 / TV	Selects the analogue A2, digital D2 or TV input

ⓘ An analogue or optical digital input can be assigned to the "TV" input, depending on your TV set's facilities. See chapter '**System settings (System configuration menu)'**.

Menu functions

⬭◯ **Alarm timer**	Long press: Brief press:	opens the alarm timer menu (see "**Alarm timer**" chapter). quick select for timers 1, 2 and 3; also disables an active timer. An alarm source must be set once using the Alarm Timer menu (see "**Quick-select timer**" chapter).

|	
Quick-select timer	Once the alarm source and brightness are configured, you can quickly and easily set a new alarm time (see "**System settings / Alarm timer menu**" chapter).

Quick select timer, e.g. Alarm 1	Switching the Alarm off
Alarm 1: FM (BFBS) ◁ 07:15 ▷ ⬸ Vol 25 ⬿ OK	Alarm: Off OK

Activating alarm 1, 2 or 3	Press the ⬭◯ button - repeatedly if necessary - to select the alarm you wish to use. The alarm time can be altered using the ⬭◀ / ⬭▶ buttons. The alarm volume can be adjusted using the - ⬭◢ + buttons. Once you have made a change, or set your preferred alarm time, you must then press the ⬭OK button to adopt the setting or switch the alarm on. The alarm is then on, and the *Caruso* Blu will switch itself on at the alarm time you have set.

(i)	If you set an alarm time in the stand-by mode **'Off'**, the machine automatically switches over to **Comfort stand-by** mode so that the alarm function can work. At the same time a corresponding message is superimposed on the integral screen.

Switching off alarm times	You can switch off an alarm time using the quick-select timer. Press the (⏲) button briefly - repeatedly if necessary - until the "Timer: off" menu point is superimposed on the integral screen. Press the (OK) button to confirm the "Off" option.

(SYS) System menu	Brief press:	opens the **'System settings'** menu (for further details see the chapter entitled **'System settings'**)

(SRC) Source menu	Brief press:	opens the menu for the selected source (DVD/Blu-ray track menu, Tuner menu, etc.)
	A long press	opens the Setup menu '**Network configuration'** for the source Streaming Client

(☰)	Displays the Favourites list created on the *Caruso* Blu (FM, DAB, SCL)

(◀)	Returns to the previous point / change button

(▶)	Confirms the input / change button

(▼)	Selects the next point within a list / select button

(▲)	Selects the previous point within a list / select button

(OK)	Confirm / select button in menus and lists A brief press selects the highlighted menu point / list point

(◀◀) / (▶▶)	Brief press:	Selects the previous / next track or piece during playback. Selects the next station in the favourite list
	Long press:	Fast forward / rewind: searches for a particular passage. Tuner: Search

Loudspeaker / Volume

(VOL +) / (VOL -)	Increases / reduces volume
⚠	**Continuous listening to programme material at very high volume can result in permanent loss of hearing.**

LED (between the buttons)	The LED flashes when the loudspeakers are switched off (Muting). The LED glows continuously if the Protection circuit has switched the machine off, e.g. due to overloading / overheating. If this should happen, please switch the machine off and leave it for about five minutes. When the machine has cooled down, it should work normally once switched on again. If this action does not cure the problem, please contact your **T+A** dealer.

④ Disc mechanism functions

Disc drawer	The drawer is opened and closed by pressing the (⏏) button. Alternatively the drawer can be opened with a long press on the (■) button on the remote control handset, and closed again by pressing the (�▶) button on the handset.

(⏏)	Button for opening and closing the disc drawer.

(▶❚❚)	Starts playback Halts current playback (pause) Resumes playback after a pause

(■)	Ends playback

(◀◀)	Selects the previous track / piece in the playlist

(▶▶)	Selects the next track / piece in the playlist

Front panel connections

⑤	⌒ (Headphones)	Socket for stereo headphones with a minimum impedance of 32 Ω.

When headphones are plugged in, the *Caruso* Blu's internal loudspeakers are automatically switched off.

⚠ **Note regarding the use of headphones**
Continuous listening to programme material at very high volume using headphones or earphones can result in permanent loss of hearing. You can avoid subsequent health problems by avoiding continuous listening at high volume through headphones or earphones.

⑥	**USB AV**	Socket for a USB memory stick.

This USB port can be used to reproduce **audio and video files**. The method of operation is described in the chapter entitled **'Operating the disc player (Media Player)'**.

ⓘ The storage medium must be formatted using the FAT16 or FAT32 file system.

The USB memory can be powered via the USB port provided that its current drain is in accordance with the USB norm (< 500 mA).

Display elements / Remote control receiver

⑦	**Remote control receiver**	The remote control receiver is located below the screen.

ⓘ When using the remote control system please point the **FM100** handset in the direction of the receiver.
The line of sight between the **FM100** and the remote control receiver in the *Caruso* Blu must not be interrupted by any obstacles. Installing the *Caruso* Blu behind the glass doors of a cabinet will also adversely affect the remote control system. It is essential to prevent potentially interfering light (from fluorescent lamps and energy-saving bulbs) falling directly on the receiver, as this may markedly reduce the effective range of the remote control system.

| ⑧	**Display**	The graphic screen of the *Caruso* Blu displays all information regarding the status of the machine, the music track currently being played and the radio station currently tuned. The display is context-sensitive and varies according to the capabilities and facilities of the service or medium to which you are currently listening.

The most important information is highlighted on the screen in a context-sensitive manner. Supplementary information is displayed above and below the main text, or by means of symbols. The symbols used are listed and explained in the table below.

The screen can display the time of day in comfort standby and is dimmable (variable brightness); it can therefore be adjusted to suit your personal preference and requirements. (see chapter **'System settings (System configuration menu)'**)

The displays and symbols which appear on the screen vary according to the currently active function (SCL, Disc, etc.) and the type of music currently being played.

The basic areas of the screen:

- Display field (a) shows the currently active source.
- Display field (b) shows information relating to the piece of music being played. The essential information is displayed enlarged in the main line.
- Display field (c) shows information relating to the device and playback.
- The bottom line (d) displays supplementary context-sensitive information (e.g. bitrate, elapsed time, state of reception).

Detail display   Large-format display
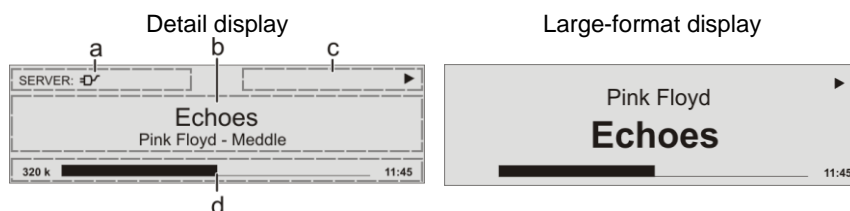
ⓘ The *Caruso* Blu provides different screen displays for the Streaming Client, CD player and the FM radio.

- **Detail display:**
  Small-text display showing a large number of additional information points, e.g. bit-rate etc.
- **Large-format display:**
  Enlarged display of the most important information, clearly legible even from a distance

A long press on the ◯◍◯ button on the remote control handset is used to switch between the display modes.

Screen symbols and their meaning

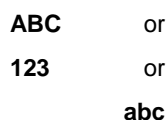|	
✪	**Making connection** (Wait / Busy) The rotating symbol indicates that the *Caruso* Blu is currently processing a command, or is attempting to connect to a service. These processes may take some time to complete depending on the speed of your network and the load upon it. During such periods the *Caruso* Blu may be muted, and may not respond to the controls. Please wait until the symbol disappears, then try again.
♫	Indicates a **music track** which **can be played**, or a **playlist.**
▱	Indicates a **folder** which conceals further folders or lists
⇒◻✓	Indicates that a source is being reproduced via a **cable connection**.
🛜	Indicates that a source is being reproduced via a **radio connection**.
▶	Indicates that the *Caruso* Blu is reproducing a station or playing back a music track.
‖	Pause indicator
🔇	Indicates that the speakers are switched off.
128 k ▰▰▰▱▱ ◻	Buffer display (fullness indicator, memory display) and data rate indicator (if available): The higher the data rate, the better the quality of reproduction.
▰▰▰▱▱ 1:20	Display of the elapsed playback time. This information is not available for all services.
←	Indicates that the ◯◀◯ button can be used to switch to a higher menu or select level.
0 / 0	Position indicator in select lists. The first number shows the current position in the list, the second number the total number of list entries (length of list).
↵	Indicates that the selected menu point or list point can be activated by pressing the ◯▶◯ button.
ABC or **123** or **abc**	Display of the symbol input modes
● / ⦾	Indicates Mono or Stereo reception of the FM – Radio.

Remote Control

Introduction

In general terms the function of the buttons on the remote control handset are the same as the corresponding buttons on the front panel of the machine.

The infra-red receiver for the remote control handset is located in the screen area of the *Caruso* Blu . There must be line of sight contact between the **FM100** and the screen.

The following tables show the remote control buttons and their function when operating the machine.

Button	Function
⏻ (red)	Switches the machine on and off
SCL	Selects the Streaming Client function (Internet Radio, access to music servers and USB media).
DISC	Selects the CD / DVD / Blu-ray function
A1/PH D1	Selects the last used source ANALOG A1 or Digital D1 * Press the button repeatedly until the desired listening source appears on the screen.
A2 / VID D2	Selects the last used source ANALOG A2, Digital D2 or TV * Press the button repeatedly until the desired listening source appears on the screen.
TUN RADIO	Selects the last used source FM-tuner / DAB or Bluetooth audio * Press the button repeatedly until the desired listening source appears on the screen.
1 2 abc ... 9 xyz 0 ⎵	Direct alpha-numeric input, e.g. track number, quick station select, radio station. The buttons 0 and 1 are also assigned special characters. During the text input procedure you can use the ▲▼ button to toggle between numeric and alpha-numeric input, and between capitals and lower-case letters.
⊄ (yellow)	Brief press switches sound on and off (MUTING)
- ◢ + (yellow)	Reduces / increases volume (volume control rocker)
♪	A brief press opens the menu for altering the tone settings: Balance / Tone Control / Treble / Bass Center / Sub-woofer / Loudness / Sound (sound fields) The menu points are called up using the ▲ / ▼ buttons, and can then be altered using the ◀ / ▶ buttons. For a more detailed explanation please refer to the chapter entitled 'Tone settings' (TONE menu).
◫	A long press is used to switch between two different front panel display modes.

	Radio	**Streaming Client**	**Disc Player**	**Bluetooth**
Navigation buttons				
◀	Return to previous point	Return to previous point During alpha-numeric character input the ◀ button can be pressed to erase a character.	Cursor movement to the left	
▶	Confirms the input	- Opens a folder - Starts a piece of music - Selects an Internet station	Cursor movement to the right	
▲	Selects the previous point within a list	Selects the previous point within a list	Cursor movement upward	
▼	Selects the next point within a list	Selects the next point within a list	Cursor movement downward	
OK	Confirmation button during input procedures	Confirmation button during input procedures Opens a folder, starts a piece of music, selects an Internet station.	Confirmation button during input procedures	

	Radio	**Streaming Client**	**Disc Player**	**Bluetooth**
Disc-Mechanism control				
⏮		Selects the previous track in the playlist	Selects the previous track during playback	Selects the previous piece in the playback list
⏪ ⏩	Brief press: manual fine-tuning Long press: Search * Only FM Radio	Rewind / fast forward to search for a particular passage	Rewind / fast forward to search for a particular passage The search speed can be varied by repeatedly pressing these buttons. Press the ▶ button to end the search.	
⏭		Selects the next piece in the playlist	Selects the next track during playback	Selects the next piece in the playlist
↩ (REPEAT)		Repeat function (see Chapter **'Operating the Streaming Client'**)	Repeat function (see Chapter **'Operating the Blu-ray disc Player'**)	
■ (STOP)		Ends playback	Brief press: Ends playback Long press: Opens and closes the CD drawer in **STOP** mode	Ends playback
▶ (PLAY/ PAUSE)	Select station from Favourites list	• Starts playback of titles / folders (**Play** function) • During playback: Halts playback (**pause**) or resumes playback	• Starts playback (**Play** function) • During playback: Halts playback (**pause**) or resumes playback	• Starts playback (**Play** function) • During playback: Halts playback (**pause**) or resumes playback

	Radio	Streaming Client	Disc Player	Bluetooth
Menu functions				
(SYS)	Opens the **System Configuration** menu (e.g. adjusting screen brightness)			
(SRC)	Opens the Favourites menu when the Favourites list is displayed	Brief press: Switches to main menu (Home) Long press: Opens the network configuration menu	Brief press: Opens the Disc menu	
Special functions				
☹ (red)	Long press: Removes a favourite from the station list	Long press: Removes a favourite from the Favourites list created on the *Caruso* Blu	Red button in menus	
☺ (green)	Adds a favourite to the station list	Adds a favourite to the Favourites list created on the *Caruso* Blu	Green button in menus	
I/II (yellow)	**Only FM-Radio:** Button for switching between **Stereo reception** (display 🔘) and **Mono reception** (display ●)		Yellow button in menus	
▲▼ (blue)		During character input: Repeated presses switch between numerical and alpha-numeric input, and between capital and lower-case letters In lists: Search function (alpha search)	Blue button in menus	
(☰)	Displays the Favourites list	Displays the Favourites list created on the *Caruso* Blu	BD / DVD only During playback: selects the sub-title language and / or switches sub-titles on and off.	
(⏏)	Memory button for quick station store	Memory button for quick station store	BD / DVD only: Switches between soundtracks present on the disc	
(🔘)	Switches the Radiotext function on and off. Long press: Switches between different screen displays	Toggle switch between display of current music track and list navigation Long press: Switches between different screen displays	Superimposed information	
(👁)			DVD only: if the angle symbol is displayed: switches between different camera angles	
(F1)			Selects the audio track	

Basic Functions of the *Caruso* Blu

The basic functions of the *Caruso* Blu, described in this chapter are always available, regardless of the selected source.

Switching sources

The source buttons on the front panel or the remote control handset are used to select the desired internal source (Disc Player, VHF radio / DAB+, Bluetooth, Streaming Client) or an external source (Analogue in, Digital in and TV in) for playback.

Once the *Caruso* Blu has switched to the appropriate source, internal sources can be operated using the remote control handset or the front panel buttons.

Please refer to the following chapters for details of operating the individual source devices.

Volume control

The volume of the *Caruso* Blu can be adjusted in fine increments using the (VOL +) / (VOL -) buttons on the front panel, or the - (◢) + button on the remote control handset. A brief press on one volume button increases or reduces the volume by one increment. Holding one of the volume buttons pressed in causes the volume to change continuously.

Tone settings (Tone menu)

FM100   *Caruso* Blu

(♪)   (SYS)

Tone settings

The *Caruso* Blu features a range of facilities for adjusting the sound to suit your personal preferences, the system's location and your room acoustics. All sound settings are grouped together in the tone control menu (TONE menu).

The tone control menu is called up using either the (♪) buttons on the remote control handset or on the machine itself using the menu point Tone (tone control settings) in the (SYS) menu.

The individual menu points may offer different set-up options depending on the type of reproduction, i.e. via the integral speakers or external loudspeakers. The features of the tone control menu are explained in detail in the next section.

ⓘ Some points in the Sound menu only appear if the associated option is switched on in the System menu.

Menu point	Adjustment range options:	Explanation:
Balance	61L ... 0 ... 61R	This menu point is used for altering the level balance between the left and right loudspeakers, in order to compensate for an imperfect listening position. The level balance can be adjusted in increments of 1 dB; the current value is displayed on-screen.
Tone Control	off / on	This menu point can be used to disable (by-pass) the *Caruso* Blu' **s** tone controls. To switch off the tone controls, select the "OFF" setting. When the tone controls are switched off, any adjustments you make to the following menu points "BASS" and "TREBLE" have no effect.
Treble **Bass**	-12 ... 0 ... +12	These two menu points are used to alter the treble and bass settings. The value affects the internal loudspeakers and any external speakers connected to the system.
Center (This menu point only appears if the menu point Caruso + external is selected in the System Configuration / Loudspeaker menu.)	-15 ... 0 ... +15	This menu point allows you to alter the balance between the loudspeakers of the *Caruso* Blu and any external loudspeakers connected to the system.
Ext. Subwoofer (This menu point only appears if an external sub-woofer is connected, and it is switched on in the System Configuration / Loudspeaker menu.)	-15 ... 0 ... +15	The volume of the sub-woofer can be adjusted at this point. Adjust the volume of the sub-woofer to suit the acoustic conditions of the listening room, and the volume of the other channels.
Loudness	off / on	The *Caruso* Blu features a volume-dependent tone correction system (**LOUDNESS**) which compensates for the frequency-dependent variation in the sensitivity of the ear at very low volume levels due to the physiology of the human auditory system. This set-up option is used to switch loudness on or off.

Tone (sound fields)	The following set-up options are available if the internal loudspeakers of the *Caruso* Blu are used for playback. (See the **'**System Configuration menu / Loudspeaker menu' for the method of switching to the internal loudspeakers)
Normal	Linear tone control, without equalisation, suitable for using the system on sideboards and similar locations.
Smooth	If you prefer a relaxed sound image with slight de-emphasis on the treble, select the Soft sound field option.
Near	If the listening distance to the *Caruso* Blu is very small (<1.5 m), we recommend the Close setting (close-range equalisation)
Speech	This option improves the comprehensibility of speech in spoken word programs, reportage and sports transmissions.
Shelf	If the *Caruso* Blu is set up in a confined position close to shelf walls, the result may be excessive emphasis on low frequencies; this can be corrected by selecting the SHELF set-up option.
Table	Setting up the system on a table with a large top can cause particular frequency ranges to be amplified. This problem can be corrected by selecting the Table set-up option.
	The following set-up options are available if the *Caruso* Blu is operated in conjunction with external loudspeakers. (See the **'**System Configuration menu / Loudspeaker menu' for the method of switching to external loudspeakers.)
Normal **Wall** **Corner**	Positioning loudspeakers close to a wall or corner has the effect of emphasising the low frequencies, which can result in an unnatural, bass-heavy sound image. Excessive bass emphasis caused by speaker positioning can be corrected in this menu point by selecting one of the set-up options Wall or Corner.
3K-Stereo	Under this menu item the 3-channel playback can be set to "normal" or to "wide" for an improved spatial depth. Depending to your personal hearing preferences.

ⓘ This menu item appears only if in the speaker configuration menu the option „Caruso + external" is selected.

Alarm Timer

The machine features an integral Timer module which is capable of switching the *Caruso Blu* on with a selectable source at a programmable time (alarm clock). Three times can be programmed.

ⓘ A long press on the (⊘) button in 'App' or 'Comfort' standby calls up the Alarm Timer menu even when the machine is switched off (Comfort standby); you can then make any changes you like without having to switch the system on beforehand.

Display of alarm times

The LED above the (⊘) button lights up in different colours to indicate when a timer is switched on. The key is as follows:

LED Colour	Alarm time
Off	Alarm OFF
Red	Alarm time 1 ON
Green	Alarm time 2 ON
Blue	Alarm time 3 ON

The screen also displays an alarm symbol with the alarm time at bottom left when the device is switched off, unless you have switched off the screen for the alarm function.

Alarm Timer menu

Calling up and operating the menu

- A long press on the (⊘) button on the front panel calls up the menu.
- When you open the menu, you will hear the currently set alarm source at the currently set alarm volume.

  The screen displays the following Select points:

Adjustment facilitiy			
Alarm	Alarm Time 1	Alarm Time 2	Alarm Time 3	Alarm Off
Alarm Time	00:00	...	23:59	
Alarm Source	Tone	Radio BFBS R1	Disc	
Alarm Vol.	10	...	70	
Time Mode	Summer time	Winter time	RDS	
Set Time	00:00	...	23:59	
Brightn. Clk	Off	1	...	4

- Use the (▲) / (▼) to select a point in the menu.
- If you wish to change a selected menu point, first press the (OK) button, and then use the (◄) / (►) buttons to alter the value.
- To accept the setting once you have altered the value, press the (OK) button again.
- If you wish to quit **without** accepting an alteration you have made, press the (■) button at any time.
- Press the (⊘) button on the front panel again to leave the menu.

Menu point
Alarm

In this menu point you can switch on one of Timers 1, 2 or 3 to act as an alarm clock, so that you can set up the alarm settings. The same menu point is also used to switch the alarm off again.

Alarm with automatic power-off

If the timer is active, the *Caruso Blu* switches on at the programmed alarm time, and the LED above the (⊘) button flashes in the assigned colour (Timer). The *Caruso Blu* automatically switches itself off again one hour after the alarm time. Unless you disable the alarm function during this one-hour period.
If you disable the alarm function with a long press on the (⊘) button, then the LED again lights up constantly, and the timer **does not switch itself off automatically** after one hour! If you want to switch the device off, you have to do it manually.

Switching the alarm off	If the *Caruso Blu* has been switched on by an alarm time, you can switch it off again with a brief press of the ⬭ON button.

ⓘ If an alarm is active, the machine switches itself on every day at the previously selected time. To switch off an alarm time, you must set the Alarm option to "Alarm off" in the Alarm timer menu.

Menu point
Alarm time

Manual adjustment of the alarm time for the currently active alarm. The value changes slowly at first, but the rate of change increases if you hold the button pressed in.

ⓘ If an alarm time is set in stand-by mode 'Off' the machine automatically switches to Comfort stand-by mode so that the alarm function can work. At the same time an appropriate message is superimposed on the integral screen.

Menu point
Set Alarm Source

Selects the source which is to be switched on at the alarm time point.
If you select the menu point FM Radio or DAB, you can use the ⬭▲ / ⬭▼ buttons to select a radio station from the Favourites list.

⚠ Waking to the radio:
Take care to set a station which can be received.

Waking to a disc:
When you activate the alarm function please ensure that there is a playable **CD** in the disc mechanism.

Menu point
Set Alarm Vol.

You can set the alarm volume at this point. If you change the volume setting, the system immediately accepts the displayed volume level, and the change in volume is audible.

Menu point
Time Mode

This menu point is used to determine how the internal clock is set.

RDS	If you select the menu point RDS, you can select a radio station from the Favourites list using the ⬭▲ / ⬭▼ buttons.
	If you select the **'Any'** setting, the time of day is read out automatically from the RDS signal of the current selected station, and adopted by the machine. This occurs at night, and about three minutes after switching on.
	If you have selected a station, the time of day is automatically read out from the RDS signal at night. If the selected station is the current listening source, then the time of day is adopted by the machine when switched on.
	This only works if high-quality RDS reception is available.
	It is now impossible to set the wrong time of day manually!
Summer time	The time of day can be set manually in the menu point **'Set time'**.
Winter time	The time of day can be set manually in the menu point **'Set time'**.

Menu point
Set Time

Manual method of setting the internal clock to the correct time.

Any change you make at this point occurs slowly at first - holding the button pressed in increases the rate of change.

ⓘ Manual adjustment is only possible if you have set Summer or Winter in the menu point 'Clock mode'.

Menu point
Time display

At this point the time format can be set to 12 hour (AM / PM) or 24 hour format.

Menu point
Disp. Brightness (Stdby)

At this point you can adjust the screen brightness in Standby mode to suit your personal preference. The brightness setting becomes active immediately. The 'Off' setting can only be selected if no alarm time is active.

Operating the source devices in detail

Operating the Radio

RADIO

The *Caruso* Blu can receive both FM (VHF) radio and DAB+ (digital radio). The integral DAB+ receiving section is backwards-compatible with DAB, to ensure that you have access to a wide range of stations.

You can select your preferred type of reception by pressing the **RADIO** button - repeatedly if necessary.

Favourites lists are available for FM and DAB mode, enabling you to manage your favourite stations conveniently.

ⓘ When you are listening to DAB radio, it may take up to two seconds to switch stations, depending on the frequency band.

Display

FM Radio | DAB Radio
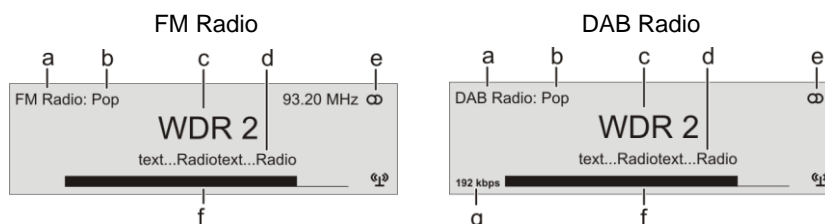
a) Displays the type of reception currently in use.
b) Hear the music type or style is displayed, e.g. Pop Music.
   This information is only displayed if the transmitting station broadcasts it as part of the *RDS* system. If you are listening to a station which does not support the *RDS* system, or only supports it in part, these information fields remain empty.
c) The frequency and / or the station name is displayed in enlarged form. If a station name is displayed, its frequency is shown in area 'e'.
d) These lines display information which is broadcast by the station (e.g. Radiotext).
e) Display of Stereo '⊂⊃' / Mono '●'
f) The *field strength* and therefore the reception quality to be expected from the set transmitting station can be assessed from the field strength.
g) Bit-rate of the broadcasting station when listening to DAB radio.
   * The higher the bit-rate, the better the station's sound quality.

RDS functions

ⓘ If the station being received is broadcasting relevant RDS data, the following information will be displayed on the screen:

- **Station name**
- **Radiotext**
- **Program type (genre)**

For stations that do not support the RDS system or only partially or with weak reception, no information will be displayed.

Switching Radio Text on and off

The Radio text function can be switched on and off by briefly pressing the ⊂⊃ button on the remote control handset.

Mono / Stereo

You can toggle the radio of the *Caruso* Blu between stereo and mono reception by briefly pressing the **I/II** button. The reception mode is shown on the screen by the following symbols:

'●' (Mono) or **'⊂⊃'** (Stereo):

If the station you wish to listen to is very weak or very distant, and can only be picked up with severe background noise, you should always switch to MONO mode as this reduces the unwanted hiss significantly.

ⓘ When you store the station in the Favourites list, the settings you enter for this station are also stored, and are automatically restored the next time you call up the station.

Manual adjustments
*Only available for FM radio

Station Search

Holding one of the ⏪ / ⏩ buttons pressed in initiates a station search for FM tuner in the upward or downward direction. The station search stops automatically at the next station.

Adding stations to the Favourites list

First set the desired station manually (by briefly pressing the ⏪ / ⏩ buttons) or using a search (holding the ⏪ / ⏩ buttons pressed in). As soon as the station is audible, you can add it to your Favourites list by pressing the ☺ button.

Favourites List

Favourites List and *Presets*

In addition to manual tuning and searching, the radio of the *Caruso* Blu also features a **Favourites list** and **Presets**, which provide a fast, convenient method of managing your preferred stations and calling them up at any time.

The Favourites list can store up to 60 FM stations and up to 200 DAB stations. You can edit the lists conveniently at any time.

It is also possible to store 10 stations under a station number (Preset), and then to call it up directly by entering the station number. Presets are particularly useful if you wish to call up stations when the screen is not in sight (e.g. from an adjacent room), or via the domestic control system.

Creating the Favourites list
(Automatic station scan)

When you have called up the Favourites list by pressing the ☰ button (**FM100**), you can press the ⬛SRC button to call up the Favourites menu, from which the following points can be selected using the ▲ / ▼ buttons:

```
Manage Favourites
Sort Favourites by              Stationname
Create new fav-list                   Start
Add new stations                      Start
```

To create a new Favourites list, select the "**Create new Favourites list**" menu point and press the OK button to start the station search. The screen displays "**Station scan**", and the *Caruso* Blu now automatically stores the stations it can receive in the Favourites list. If a Favourites list already exists, this process overwrites it.

To search for new stations and add them to the list, select the "**Add new stations**" menu point and press the OK button to start the station search. All new stations located are now automatically added to the existing list.

Erasing stations from the Favourites list

Open the Favourites list by pressing the ☰ button. Select the station you wish to erase from the list, hold the red ⊗ button pressed in for a few seconds: the station is now removed from the Favourites list. After the erasure the tuner automatically switches to the next station in the Favourites list.

Sort function

The Favourites list can be sorted according to various criteria; these are selected in the menu point **'Sort Favourites by'**:

Frequency   Stations are sorted by frequency in ascending order (RDS stations only) *1)

Station name   Stations are sorted alphabetically by station name

Program ID   Stations are sorted by station group (RDS stations only)

Now use the ◀ / ▶ buttons to select the desired sort criterion, and confirm your choice by pressing the OK button.

ⓘ | 1) Sorting stations by "frequency" is not possible with DAB stations, as in some cases several stations use the same frequency (channel).

Selecting radio stations from the Favourites list

• Call up the Favourites list with the ⬛ button.

•

a

88.90 Mhz - NDR 2

93.20 MHz - WDR 2

104.40 MHz - NDR Kultur

← (12/25)   ↵

c   d   b

a) Use the ▲ / ▼ buttons to select a stored station from the Favourites list. The selected station is displayed in enlarged form.

b) Press the ▶ or ᴏᴋ button to select the station displayed in enlarged form.

c) Press the ◀ button to return to the station previously selected.

d) Position display in the Favourites list.

• You can also select stations directly, without calling up the Favourites list as described above, by briefly pressing the ▲ / ▼ buttons in the Favourites list.

Presets

Storing a Preset

• Select a station, either using the ◀◀ / ▶▶ buttons, or from the Favourites list.

• Call up the Store Preset function by pressing the ⬛ button.

• An input window now appears in which you can enter a number using the numeric buttons (0 to 9). The Preset is stored when you press a numeric button. The front panel screen briefly displays the message **'Preset Stored at'** to confirm this.

ⓘ If a station is already stored at this Preset number, it is overwritten by the new station.

Calling up a Preset

At any time you can quickly call up a station stored as a Preset by entering its Preset number using the **FM100's** numeric buttons 0 to 9 .

Operating the Disc player
Basic functions

Switching on

Press the ⬭ON⬭ button to switch the machine on. For all the functions described in this section the **Disc Player must be selected as listening source**. The first step is to switch the *Caruso* ᴮˡᵘ to Disc Player mode by pressing the ⬭DISC⬭ button on the remote control handset Select HDMI input of your TV set or projector to which the HDMI output of the *Caruso* ᴮˡᵘ is connected.

ⓘ **The integral disc player features its own LAN socket** (BLU-RAY-LAN; see also the wiring diagram in the Appendix) **in order to play back BD-Live and other Internet functions.**

If the following message appears, the problem may be that the network for the disc player (BLU-RAY-LAN socket) is not connected, or not configured correctly. If you do not wish to use BD-Live or other Internet functions, you can simply ignore this message.

Message:
Your BD player appears not to have a correctly configured Internet connection.
Red button for configuring the network connection.

If you wish to configure your Internet connection, call up the Setup menu for the disc mechanism, and enter the appropriate settings in the Network category.

Inserting a CD

Open the disc drawer of the *Caruso* ᴮˡᵘ by pressing the ⬭⏏⬭ button on the player's front panel, and lay the disc in the depression in the drawer; the side to be played must face down. Close the disc drawer by pressing the ⬭⏏⬭ button again
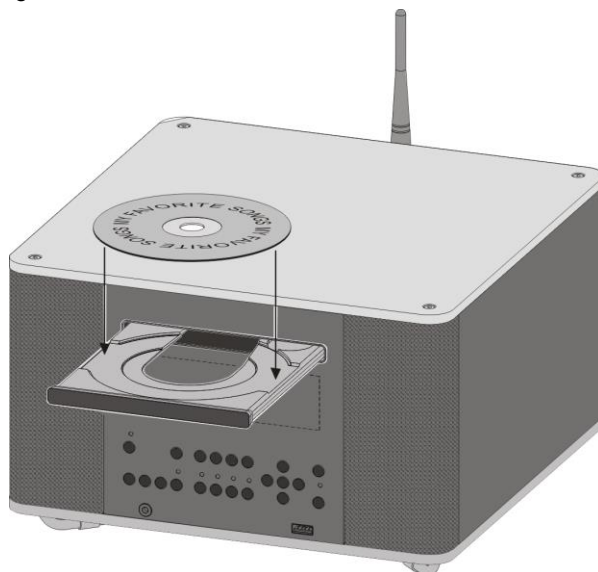
Starting playback

Some Blu-ray discs and DVDs feature an "Autostart" function; these discs automatically start playing the main film when the disc is placed in the drawer. When other discs are inserted, a Main Menu is displayed which is then used to start playback manually, or to select a scene.

If a CD does not start automatically, it can be started manually by pressing the ⬭▶ll⬭ button on the front panel, or the ⬭OK⬭ button on the remote control handset.

Stopping playback

Playback can be stopped at any time by pressing the ⬭■⬭ button on the machine's front panel, or on the remote control handset.

Pause
(during playback)

Pressing the ⬭▶ll⬭ / ⬭l▶⬭ button halts playback temporarily. Pressing the ⬭▶ll⬭ / ⬭l▶⬭ button resumes playback.

ⓘ Playback is automatically interrupted if you switch to a different source. Playback resumes if you select the 'Disc' source again.

Selecting a Chapter or Title

1.) Selecting with the skip buttons

When a disc is playing, it is possible to skip to the next or previous Chapter with a long press on the ⬇ / ⬆ buttons on the front panel / remote control handset.

ⓘ If you wish to skip several Chapters, you can hold the button pressed in continuously until you reach the desired point, instead of giving repeated long presses on the Skip button.

ⓘ The **FM100** remote control features additional skip controls in the form of the ⏭ / ⏮ buttons, which skip forward / back by one Chapter when pressed briefly.

ⓘ When the last Chapter of a Title is reached, the *Caruso* Blu automatically skips to the first Chapter of the next Title.

2.) Selecting with the Disc menu

Most Blu-ray / DVD discs feature a Disc menu which provides a convenient method of selecting scenes.

During playback the Disc menu can be called up at any time by pressing the SRC button on the front panel / remote control handset.

Use the Navigation buttons to select the desired scene from the menu, then start playback of the scene by pressing the OK button.

3.) Using the numeric buttons to select a Chapter / Title

It is also possible to skip directly to a Chapter on a DVD or Blu-ray disc or a Track on a CD by entering the Chapter number or Track number using the numeric buttons (0 . . . 9) on the remote control handset.

ⓘ If the Chapter or Track number has more than one digit, press the numeric buttons briskly in the correct order.

Search

With playback in progress a search can be started with a long press on the ◀ / ▶ buttons on the front panel, or the ◀◀ / ▶▶ buttons on the remote control. The speed of the search can be increased by holding the button pressed in.

Press the OK button briefly to halt the search.

ⓘ Sound is muted during the search process.

Repeat functions (REPEAT)

The *Caruso* Blu has multiple repeat modes (REPEAT) for the repetition of chapters / titles, or the whole disc

Briefly pressing the ↺ button on the remote control handset displays the currently set repeat function on the connected screen. Further button-presses cycle through the other repeat functions.

REPEAT mode	On-screen display
Track / Chapter / Title / File	⮂ Track / File
Disc	⮂ All
Off	

To access Mix mode (shuffle, ⤭) (CD playback only), you must hold the button pressed in. After this, a brief button-press cycles through the various available Mix modes.

ⓘ Please note that not all the operating modes can be selected for all discs. Many Blu-ray discs do not feature any Repeat functions.

Menu functions

General

Many functions of DVD and Blu-ray players are controlled using on-screen menus. The *Caruso* Blu uses menus for the configuration process and for the basic device settings (Setup menu).
The set-up procedure is described in detail in the chapter entitled 'Setup menu (Settings)'.

DVDs and Blu-ray discs may also have their own menus with Select facilities for individual **Titles** and / or **Chapters**. Depending on the DVD / Blu-ray disc, you may also find games, bonus material or alternative camera angles, synchronous speech, sub-titles etc., which can be set up or called up using the Disc menu.

ⓘ The content, appearance and behaviour of the Disc menu are determined and controlled by the disc itself. If functional problems occur involving the Disc menu, please contact the disc manufacturer or retailer.

Calling up the Disc menu

The **Disc menu** can be called up at any time during playback, allowing you to carry out adjustments as required.

To call up the menu press the ⌐SRC⌐ button on the front panel / remote control handset briefly. If the DVD / Blu-ray disc contains a Select menu, this will now appear on the TV screen.

Menu operation

In the Select menus the following buttons are used for menu navigation:

⌐SRC⌐   **Brief press during playback:**
Opens Disc menu, Blu-ray film continues to play
Long press during playback:
Stops films, opens Disc menu

⌐▲⌐   up

⌐▼⌐   down

⌐◄⌐   left

⌐►⌐   right

⌐OK⌐   **Confirm button** [ENTER]

Navigation within the menu

Use the numeric buttons or the cursor buttons (⌐▲⌐, ⌐▼⌐, ⌐◄⌐, ⌐►⌐) to select an item within the menu; it will then be highlighted.

Selecting a menu point

Press the ⌐OK⌐ button to activate or implement a selected menu point.

Leaving the menu

To quit the Select menu, briefly press the ⌐SRC⌐ button on the front panel / remote control handset.

Special modes of operation

Special functions for Blu-ray and DVD discs

Slow motion

A long press on the (▶ll) button on the front panel or the pause button (l▶) on the remote control during playback switches to slow motion mode. Further long presses on the button reduce the speed step by step (1/4, 1/8 etc.).

To halt slow motion, briefly press the (▶ll) button on the front panel ((l▶) **FM100**.

Single frame display

If you wish to display a scene in single-frame mode, first halt playback using the Pause button (▶ll) / (l▶). With playback paused, a brief push on the arrow buttons (◀) / (▶) on the front panel or the **FM100** causes the film to be displayed in single frame mode.

Single frame playback is halted with a brief press on the (▶ll) button on the front panel ((l▶) **FM100**).

Displaying supplementary information

A brief press of the (ⓘ) button on the **FM100** handset superimposes a window containing information relating to the status of the current playback operation:
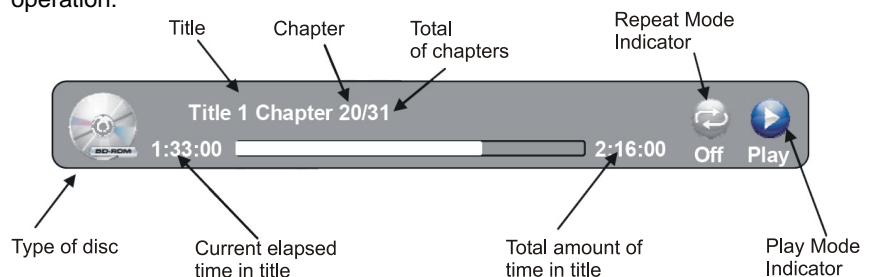
Director's commentary (Blu-ray disc only)

A further a brief press on the (ⓘ) button closes the information window.

Some Blu-ray discs contain directors' commentaries or other supplementary information. This material can be called up via the "Picture in Picture" (PIP) function of the *Caruso Blu* .

To call up the PIP function when a film is running, open Bonus View by briefly pressing the (SRC) button. If supplementary information is present on the disc, it will now be displayed in a window superimposed on the film.

Press the (SRC) button again to terminate Bonus View.

ⓘ Supplementary information is only present on particular Blu-ray media. DVDs do not provide this function.

ⓘ Not all Blu-ray discs contain supplementary information.

ⓘ Blu-ray discs which do contain supplementary information do not necessarily offer the material for all scenes.

Sub-titles (using **FM100** only)

Many DVD and Blu-ray discs allow you to select the sub-title language during playback as well as via the Disc menu.

This is accomplished by calling up the Sub-title menu by briefly pressing the (F3) button on the **FM100** again. Select the desired sub-title language in the menu which now appears.

The menu can be closed by briefly pressing the (F3) button again. Alternatively you can close the menu by pressing the (◀) button.

Switching the soundtrack (using **FM100** only)

Many DVD and Blu-ray discs allow you to change the soundtrack during play-back as well as via the Disc menu. This is accomplished by calling up the Sound menu by briefly pressing the (F1) button on the **FM100**.

The menu can be closed by briefly pressing the (F1) button again. Alternatively you can close the menu by pressing the (◀) button.

Changing the camera angle (using **FM100** only)	A brief press on the ⊚ button on the **FM100** calls up the Camera Angle menu. If the current scene contains multiple camera angles, these can now be selected from the menu.
	The menu can be closed by briefly pressing the ⊚ button again.
	Alternatively you can close the menu by pressing the ◀ button.
Direct track skip for CD (using **FM100** only)	When a CD is playing, the numeric buttons on the remote control can be used to skip directly to any track you like. Simply enter the track number using the numeric keypad.

Playing back digital AUDIO, VIDEO and PHOTO files from CD or USB MEMORY STICK

Introduction	The *Caruso* Blu supports playback of digital audio, video and photo files from CD and from USB memory sticks on the front. The media files can be generated, processed and burned to CD using a PC, or stored on a USB stick.

🛈 The audio, video and photo formats supported by the *Caruso* Blu can be found in the Specification in the Appendix.

⚠ We wish to point out expressly that it is impossible to guarantee general compatibility with such files due to the huge number of different encoding and burning programs, disc burners and media which are available.

If you find that such files cannot be played by the *Caruso* Blu, we recommend the following measures when creating your CD or USB media:

- Try using a different copy or encoding program
- Try using a different audio, video or photo format
- Try using a different make of blank disc
- Try using a different disc burner

The *Caruso* Blu provides the following functions for playing back files:

Video Player	• Pause, Stop, fast forward / rewind, repeat
	• Skip to the next / previous video file
Audio Player	• Pause, Stop, fast forward, rewind, repeat
	• Skip to the next / previous audio file
Photo Viewer	• Preview pictures ("thumbnails")
	• Slide show

Preparing the *Caruso Blu* for music / video / photo playback

Files which are to be played back using the *Caruso Blu* should first be burned onto a CD or saved on a USB stick formatted using FAT32.

Place the disc in the drawer, or insert the USB stick in the USB port on the back of the player.

⚠ For safety reasons we recommend that you switch off the *Caruso Blu* before inserting and removing a USB stick.

In rare cases you may cause damage to the data on the memory stick if you plug it in or remove it when the machine is operating.

When you place the data CD in the drawer, or plug in the USB stick, the left-hand column of the Main menu displays the type of media files found:

If there are supported media files on the medium, corresponding indicators will appear on the screen

Videos
▲
Settings ◀ ▶
▼
Music

Pictures
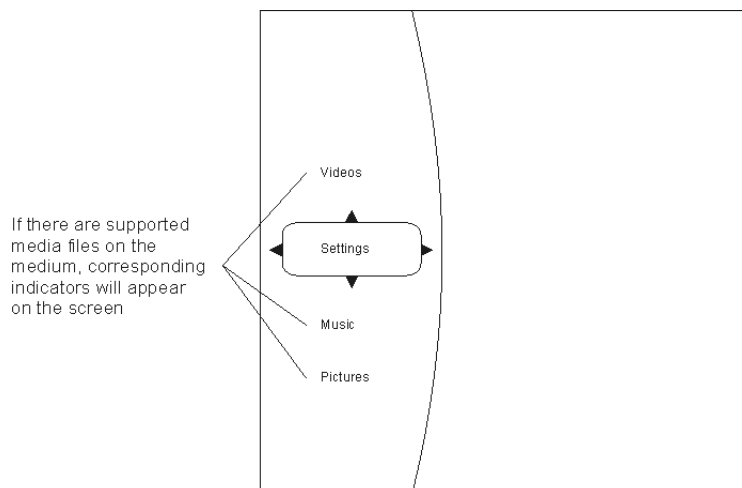
Select from the list which type of file you wish to play.

AUDIO or VIDEO playback

Selecting a source (disc or USB) for playing back audio or video files

Audio and video files can be played back from a disc or a USB memory stick. When you insert the disc or plug the USB memory stick into the USB socket on the front panel, the left-hand category list in the on-screen menu will include the entries 'Videos', 'Audio' etc., according to the content of the memory medium.

Select one of these entries, and press (OK).

In this way you can find your way to a file which can be played.

ⓘ The files which can be played in this mode (e.g. music tracks) are only displayed in the sub-menus if the appropriate playback mode (e.g. Audio) has already been selected.

Example:

Music
USB1
4 item(s)

Main Menu
Previous folder
Play Files

01 Song1.mp3
02 Song2.mp3
03 Song3.mp3

Title:
Artist:
Album:
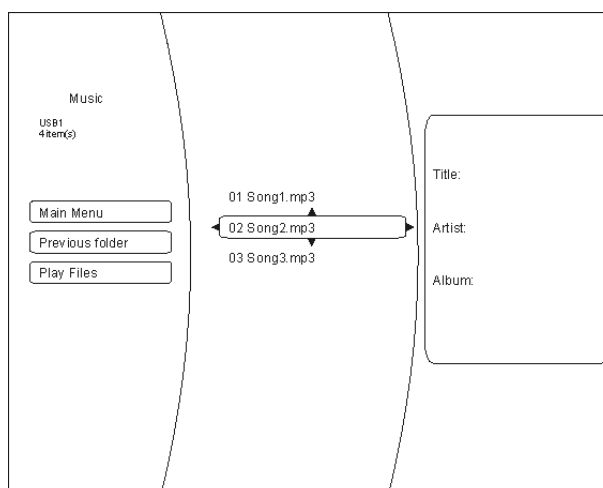
Playing back multiple audio or video files

Navigate to the files / folders which you wish to play in the central column of the menu. Use the (◀) button to move to the left-hand column of the menu, and select the 'Play files' menu option using the (▲) / (▼) buttons. Confirm with the (OK) button, and playback commences.

```
              Music
           USB1
           4item(s)

                                Title:
                      01 Song1.mp3
   Main Menu
                    [02 Song2.mp3]      Artist:
   Previous folder
                      03 Song3.mp3
   [Play Files ▶]                       Album:
```
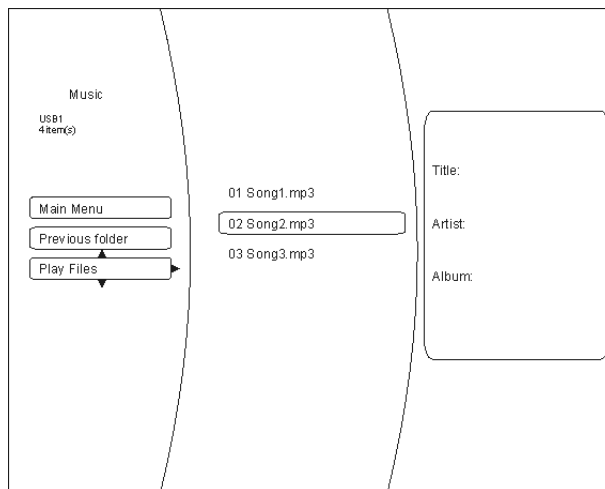
Repeat function
(**FM100** only)

As soon as the files are playing, you can select any of the following Repeat functions by repeatedly pressing the (⤺) button on the remote control handset:

- Repeat File   Repeat the current memory piece
- Repeat All   Repeat all the selected files
- Repeat Off   Repeat function off

Playing back individual files

If you wish to play an individual file, use the arrow buttons to navigate through the folders to the desired file, then press the (OK) button. This action starts playback of the piece.

```
              Music
           USB1
           4item(s)

                                Title:
                      01 Song1.mp3
   Main Menu
                    ◀[02 Song2.mp3]▶    Artist:
   Previous folder
                      03 Song3.mp3
   Play Files                           Album:
```
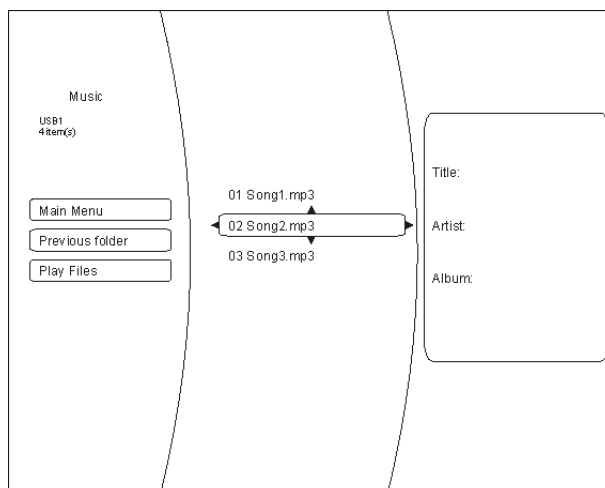
Information display for audio files

When audio files are played back, information relating to the current piece of music is displayed on-screen.

The following information can be displayed - if present in the file being played:

- Filename
- Title
- Artiste
- Album
- Album art (cover artwork)

Album Art (if present in file) — File Name — Random Indicator — Play Indicator

File 1/5 song1.mp3
Title: Cool Track
Artist: Ricardo Funiccio
Album: Dead Dux
1:33:00   2:16:00   Off Off Play

Song Title, Artist and Album Title (if present in file) — Progress Bar — Song length — Repeatl Indicatior
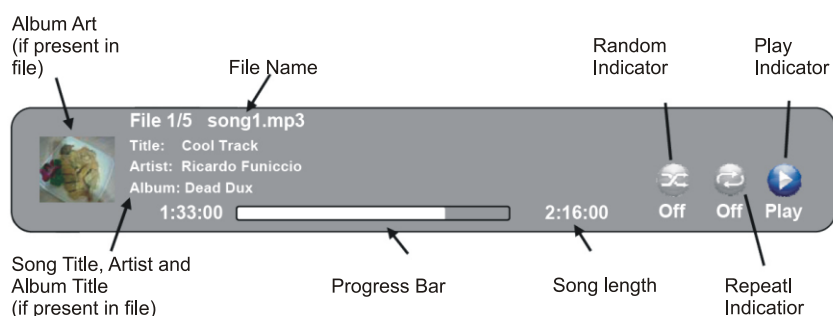
Displaying photo files (slide show)

The *Caruso Blu* can display digital photo files which are burned onto a CD or stored on a USB memory stick.

Selecting a picture data source

In principle the procedure for displaying photos is exactly as described in the previous chapter for playing audio and video material.

Select the "Pictures" option in the left-hand column of the Main menu.

Navigate through the folder structure to the folder which contains the desired photos. The photos in the folder are now displayed as preview pictures (known as "thumbnails"):

Pictures
Optical Disc
8 item(s)

Main Menu
Settings
Media Menu
Start Slide Show
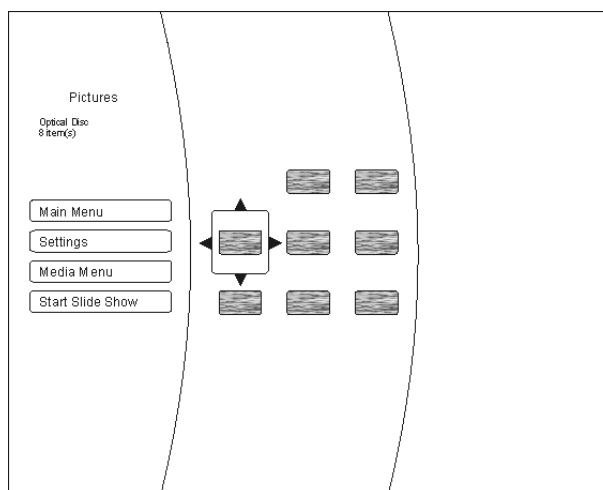
You can now use the menu options on the left-hand side of the screen to select the whole folder as a 'slide show', or select a single picture to be displayed by selecting with the navigation buttons and confirming your choice with the [OK] button.

menu point **Settings**	Using the 'Settings' menu option (in the 'Pictures' play mode) you can carry out changes to the picture display:

- Slide show effects
  - Horizontal scroll
  - Fade
  - Shutter
- Slide show delay
  - No delay
  - 1 second
  - 2 seconds
  - 5 seconds
  - 10 seconds
  - 15 seconds
  - 30 seconds

Press the ⬭OK⬭ button to close the menu.

Using BD-LIVE^{TM} functions

Introduction

Some (but not all) Blu-ray discs contain supplementary functions. These are known as "BD-Live" functions, and include:

- The facility to load film trailers
- Additional commentaries by actors and directors
- Games
- Chat functions
- Additional bonus material

The following requirements must be fulfilled if you wish to use BD-Live content:

- The *Caruso Blu* must be connected to the Internet (**BLU-RAY-LAN socket!**)
- A USB memory stick with adequate free space must be plugged in

Preparing the *Caruso Blu* for BD-Live use

Connecting BD-Live memory

Using BD-Live requires a USB memory stick with a free capacity of at least 1 GByte.

1. The USB stick must be formatted using the FAT32 file system.
2. If this is not the case, please use a PC to format the stick with the FAT32 file system before use.
3. Plug the memory stick into the front panel USB port of the *Caruso Blu*.

Preparing the *Caruso Blu* for Internet access

This is the procedure for preparing the *Caruso Blu* for Internet access:

1. In the Setup menu (Settings) of the *Caruso Blu* select the "System menu".
2. In the menu select the point "BD-Live Internet Access".
3. Ensure that **"Limit Access"** or **"Always Allow Access"** is selected.
4. Insert the prepared USB memory stick.
5. If there is less than 100 MByte of free space on the memory stick, select the option "Clear BD Storage**". This action erases any data present on the memory stick,** and ensures that there is adequate free memory.
6. Call up the 'Network' menu in the Main menu of the *Caruso Blu*.
7. Enter the correct network settings, i.e. those matching the settings of your home network, your network router and your ISP (Internet Service Provider).
8. Carry out the **'Connectivity Test'**.

ⓘ Your system must pass the **'Connectivity Test'**, otherwise there is no Internet connection, and the BD-Live Internet functions cannot be used.

BD-LIVE notes

Although downloaded BD-Live content is stored permanently on the USB memory stick, you cannot use the content without the corresponding BD-Live disc in the machine. For this reason, always place the appropriate Blu-ray disc in the player when you wish to use BD-Live.

Some BD-Live content has a limited usage time, i.e. it lapses after a certain period. Once the permitted usage time is over, you can no longer use the material. From time to time it is therefore necessary to free up the USB stick of data which you no longer use, or which can no longer be used. The unwanted data can be erased using the sub-function "Clear BD storage" in the "System" menu.

ⓘ The only option is to erase the whole of the USB memory.

BD-LIVE example: The 6th Day: BD-Live

Select the **BD-Live o**ption from the **"Special Features" menu**
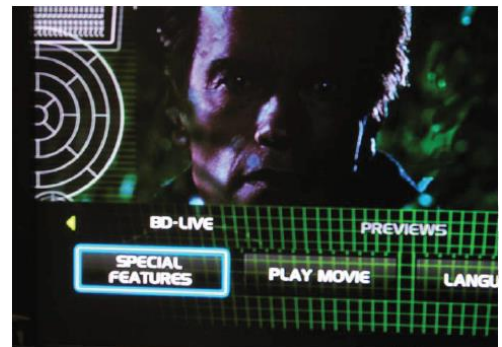
The **BD-Live menu** is now assembled; this may take a few minutes
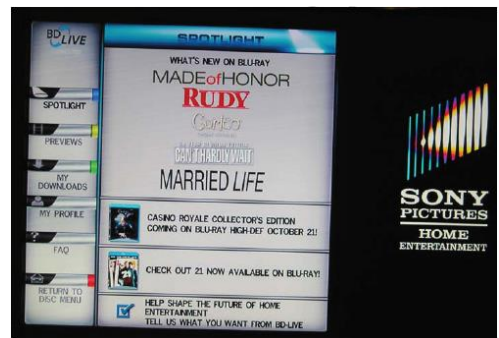
From the **Previews** sub-menu you can now select the content which you wish to download from the Internet.

The downloading process may take a few minutes, depending on the speed of your network.

The downloaded content is saved under **"My Downloads"**.
The downloaded content is now ready for use and playback.

Disc menu and Setup menu (Settings)

General notes on menu operation

Introduction

It is important to differentiate between two different menu functions: the Disc menu and the Setup menu.

- The **Disc menu** is located on the DVD / Blu-ray disc itself. In this menu you can control special functions pertaining to the individual disc, such as language, sub-title selection, background information on the film, games, etc.

  The content and exact methods of operating this menu vary from disc to disc. Generally speaking it is possible to operate this menu using the navigation buttons listed below, but in any case you should always follow the operating notes which are displayed on the screen.

  The Disc menu is opened with a brief press on the ⊂SRC⊃ button on the front panel / remote control.

- The **Setup menu** is used for altering settings which apply to the player itself; this menu is described in detail in the following chapters.

  The Setup menu appears on the screen when the disc is stopped.

Menu operation

Within the Select menus the following buttons are used for menu navigation:

⊂SRC⊃	**Brief press:** Opens the Disc menu (see Chapter **'Special DVD / VCD functions /** *Menu function'*)
⊂▲⊃	up
⊂▼⊃	down
⊂◄⊃	left
⊂►⊃	right
⊂OK⊃	**Confirm button** [ENTER]

Special DVD/Blu-ray / VCD functions

(Menu operation and navigation)

Menu function

A DVD / Blu-ray disc may contain a Disc menu with Select facilities for individual **Titles** and / or **Chapters**. Depending on the individual DVD / Blu-ray disc, it may also contain games, bonus material or alternatives for camera angle, synchronised speech, sub-titles etc., all of which can be set up or called up using the Disc menu.

ⓘ The content, appearance and behaviour of the Disc menu are determined and controlled by the disc itself. If functional problems occur in relation to the Disc menu, please contact the manufacturer or distributor of the disc.

Calling up and operating the Disc menu

The **Disc Menu** can be called up at any time during playback, so that you can make adjustments as required.

- The menu is called up by pressing the ⊂SRC⊃ button on the front panel / remote control handset.
  If the DVD / Blu-ray disc contains a Select menu, this will now be displayed on the TV screen. The integral screen shows the message 'INFO'.

- Use the numeric buttons or the cursor buttons (⊂◄⊃, ⊂►⊃, ⊂▼⊃, ⊂▲⊃) to select your desired point in the menu, i.e. to highlight your choice.

- To activate or implement a selected menu point, press the ⊂OK⊃ button.

- You can quit the Select menu by briefly pressing the ⊂SRC⊃ button on the front panel / remote control once more.

Operating the Streaming Client

General Information on the Streaming Client

The **T+A** *Caruso Blu* includes what is known as a 'Streaming Client'. This is a new class of playback devices for media content, providing a means of playing music which is stored on a vast variety of sources. These sources may be an iPod or a USB hard disc connected directly to the *Caruso Blu*, but they may also be thousands of miles away (e.g. Internet radio station). The Streaming Client can access such remote sources via a home network and the Internet.

ⓘ The network configuration is explained in the Chapter **'Network Configuration'**.

The *Caruso Blu* s Streaming Client can access the following sources:

Local sources (direct connection)	Remote sources (via home network or Internet)
USB memory sticks and USB hard discs	Internet radio
	NAS server (with UPnP-AV server)
	PC (with UPnP-AV server)

The media content formats which the *Caruso Blu* can reproduce are very wide-ranging, and extend from compressed formats such as MP3, WMA, AAC and OGG Vorbis to high-quality non-compressed data formats such as FLAC and WAV, which are thoroughly audiophile in nature. A full listing of all possible data and playlist formats is included in the Specification, which you will find in the Appendix to these instructions.

Since virtually no read or data errors occur when electronic memory media are accessed, the potential reproduction quality is even higher than that of CD. The quality level may even exceed that of SACD and DVD-Audio.

The *Caruso Blu* can also play back high-resolution audio formats (ALAC, FLAC and WAV up to 192kHz / 32bit). High-resolution audio files can be played back from a USB hard disc connected to the unit, or via a network connection. However, if you wish to use a network for 192/32 reproduction, a cable network must be used since a WLAN network is not generally sufficient for the high data rates (see also the note in the chapter entitled **'Network configuration'**).

Select Lists

The music content to be played is chosen from Select Lists. These lists are operated using the navigation buttons (cursor buttons) which you will find on the remote control handset and on the front panel. All content can be accessed via the main menu. Internet Radio in particular offers a huge number of stations, which can result in long searches or periods of navigation. We therefore recommend that you store your preferred stations in a *Favourites List*, as this makes them easy and fast to access, with no protracted searching. It is also possible to store Internet radio stations as *Presets*, just as you do with normal radio; they can then be called up directly just by entering a number.

The media content can be listed according to various criteria - Internet radio stations e.g. by country of origin, genre or alphabetical, music from media servers e.g. by artiste, album, track, genre, etc.

ⓘ The exact form of the displayed list and the preparation of the content also depend to a large extent on the capabilities of the server, i.e. the full facilities of the *Caruso Blu* cannot be exploited with all servers or media. You may therefore find that in many cases not all the functions described in these instructions can be used.

Access to Media Content via the Main Menu (Home Menu)

Main Menu
(Home-Menu)

When you call up the Streaming Client by pressing the (SCL) button on the front panel or the remote control, the front panel screen displays a list of accessible media sources:

- USB
- Internet Radio
- UPnP-AV Server (Media server) in the local network *1)
- Favorites

> 🗁 USB
> 🗁 Internet Radio
> 🗁 UPNP Server
> 🗁 Favorites
>
> (1/4)   ↵
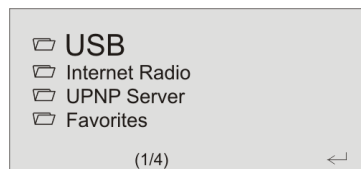
ⓘ *1) To play back media files that are stored on PC's or NAS storage devices on your home network, a UPnP-AV server software must be installed on these devices to make the media content accessible through the network.

Selecting and Playing Media Content

You can now select a device or a service using the (▲) / (▼) buttons. The selected list point is shown enlarged, and can be called up by pressing the (▶)/(OK) button.

The content of the device is displayed in the form of a list. The individual list entries are followed either by a folder symbol (🗁) or a note symbol (♫).

You can now again move to the individual list points using the (▲) / (▼) buttons, and open them with the (▶)/(OK) button.

If the list entry you open is a folder, the screen displays the contents of the folder: you can now navigate further within the new folder.

If the entry is followed by a note symbol, this indicates that the content is playable (pieces of music, playlists, radio station etc.). If you open an entry of this type, its content will be played.

ⓘ The lists and music tracks you can see when you select a device vary according to the machine and the transferred data.

Alpha-Search
(Letter Search Function)

When you are navigating through lists you can call up the *Caruso* Blu letter search function at any time by briefly pressing the (▲▼) button. The screen now displays the message 'Search _'. While this is on the screen, enter up to five letters or numerals using the remote control handset; the letters assigned to the numeric buttons are printed below the buttons. To obtain a particular letter, press the appropriate button repeatedly until the correct letter appears on the screen. Before entering the next character you have to wait until the cursor is displayed again. If you make a mistake, briefly press the (◀) button to correct it. When you are finished, confirm by pressing the (OK) button. You can switch between numbers, capital letters and lower-case letters by pressing the (▲▼) button again. After pressing the (OK) button the *Caruso* Blu moves to the first entry in the list which starts with the characters you entered. If the text searched for is not found the best matching result will be shown. You can abort the search using the (■)-button.

Select Repeat functions
(↩)

Repeated **brief presses** cycle through the repeat functions:

→ Rpt Trk (↩ **1**), → Rpt All (↩), →Normal

Rpt Trk   The current piece is repeated
Rpt All   All pieces in the current folder / the current playlist are repeated
Normal   Repeat function switched off

Long press: Switches *Mix* **mode** (Shuffle) ON and OFF
Subsequent brief button presses will cycle through the Mix Repeat operating modes:

→ Mix (⤨), → Rpt Trk (↩ **1**), → Rpt Mix (↩ ⤨)

In Mix mode the pieces are played in a random order.

Accessing Media Content using the Favourites List

The Favourites List

The Favourites list can be used to store your preferred Internet radio stations and the paths to your preferred music tracks. At any subsequent time you can then very quickly access these stations and tracks using the 'Favorites' entry in the Home Menu.

Adding Favourites to the List

If you are currently enjoying a particular Internet radio station, simply press the green ☺ button on the **FM100** handset: this adds the station to the Favourites list.

ⓘ In principle you can also add pieces on a NAS server or a USB hard disc to your Favourites list, but we only recommend this if the content of the relevant storage medium is available at all times (e.g. permanently connected USB hard disc).

Calling up Favourites

Open the Favourites list using the ▤ button, then select an entry from the list using the ▲ / ▼ buttons. Start the track or the station by pressing the ▶ / ⌷OK button.

Erasing Favourites

Entries are removed from the Favourites list by first selecting the entry to be erased using the ▲ / ▼ buttons, and then holding the red ⊗ button on the **FM100** handset pressed in for several seconds.

⚠ **Caution!**
Erase the paths to files on USB hard discs or UPnP-AV servers from the Favourites list using the ⊗ button before you erase or move files.

Using *Presets*

Preset function

You can store Internet radio stations as *Presets* using the process familiar from FM radio. These stations can subsequently be called up directly using the numeric buttons on the **FM100** remote control handset.

Storing a *Preset*

First select an Internet radio station (e.g. using the Home menu / Internet radio). When you hear the station, press the ⎘ button followed by a number 0 to 9. The station is now stored under this number.

It is possible to store a total of 10 Presets under the numbers 0 to 9.

ⓘ If a station is already stored at this Preset number, it is overwritten by the new station.

Calling up a *Preset*

Briefly press one of the numeric buttons 0 to 9. The associated Preset is now called up, and after a brief delay you will hear it.

ⓘ Presets are particularly useful when the front panel screen is not in view, but you wish to call up stations (e.g. when operating the system from an adjacent room, or when operating it via a domestic control system).

Adding Internet Radio Stations

The lists of Internet radio stations displayed by the *Caruso* Blu are very complete and comprehensive, but since new stations are constantly being added you may find that one of your favourite stations is not (yet) included in the Select lists.

In this case you can add the stations using the vTuner service (see also the Chapter **'vTuner Premium Service'**). The station added can then be accessed from the *Caruso* Blu main menu under the Internet Radio / Added Stations point.

Operating the Bluetooth source

The *Caruso* Blu's integral Bluetooth interface provides a means of transferring music wirelessly from devices such as smart-phones; tablet PCs, etc. to the *Caruso* Blu.

ⓘ For a successful audio Bluetooth transfer from a mobile device to the *Caruso* Blu the mobile device must support the A2DP Bluetooth audio transfer protocol.

Selecting the Bluetooth Audio source

Select the 'Bluetooth' source by repeatedly pressing the (A3/TUN) button on the remote control handset, or the (RADIO) / (BT) button on the *Caruso* Blu's front panel.

The machine's integral screen now displays 'Bluetooth' as source.

Setting up audio transfer

Before music from a Bluetooth-capable device can be played through the *Caruso* Blu, the external device must first be registered to the *Caruso* Blu. As long as the *Caruso* Blu is switched on and no device is connected, it is always ready to receive. In this state the screen displays the message 'not connected'.

This is the procedure for establishing a connection:

- Start a search for Bluetooth equipment on your mobile device.

- When it finds the *Caruso* Blu, make the connection to your mobile device.

Once the connection is successfully established, the message on the *Caruso* Blu's screen switches to 'connected to *YOUR DEVICE*'.

ⓘ If your device requests a PIN code, this is always '0000'.

ⓘ The procedure for establishing a connection can only be made if the Bluetooth source is activated (see chapter **'System settings'** / source name).

ⓘ Due to the large number of different equipment on the market, we are only able to provide a general description for setting up the radio connection. For detailed information please refer to the operating instructions supplied with your device.

Playback functions

Information on the piece of music being played is displayed on the integral screen of the connected mobile device. If possible we recommend that you leave the screen backlight switched on permanently to ensure that it is clearly legible.

The behaviour and method of operating the connected mobile device are determined by the device itself. In general terms the function of the buttons of the *Caruso* Blu or the **FM100** remote control handset are as follows:

Start and pause playback
(▶) / (▶‖)

The (▶) / (▶‖) buttons on the remote control handset or the front panel are used to start and pause playback (PLAY / PAUSE function).

Stop playback
(■)

Pressing the (■) button halts playback.

Switch track
(◄◄) / (►►)

A brief press on the (◄◄) / (►►) buttons during playback causes the device to jump to the next or previous piece of music within the current playlist.

Controlling the *Caruso* Blu

The *Caruso* Blu can also be controlled from the mobile device (Start/Stop, Pause, Volume, etc.). To control the *Caruso* Blu the mobile device must conform to the Bluetooth AVRCP protocol.

ⓘ Please note that many AVRCP-capable mobile devices do not support all the *Caruso* Blu's control functions. In case of doubt, please ask the manufacturer of your mobile device.

Volume adjustment

To achieve the best possible playback quality, you should only adjust the volume on the *Caruso* Blu itself: set the playback volume as high as possible on your mobile device, but not so high that the signal is distorted.

Any further changes to volume should then be made using the (VOL +) / (VOL -) button on the *Caruso* Blu or the FM 100.

NOTES

ⓘ The *Caruso* Blu has been tested with a large number of Bluetooth-capable mobile devices. However, we are unable to guarantee general compatibility with all devices available commercially since the range of equipment is so wide, and the various implementations of the Bluetooth standard differ widely in some cases. If you encounter a problem with Bluetooth transfer, please contact the manufacturer of the mobile device.

The maximum range of a Bluetooth audio transfer is normally about 3 to 5 metres, but the effective range may be affected by a number of factors. To achieve good range and interference-free reception there should be no obstacles or persons between the *Caruso* Blu and the mobile device.

Bluetooth audio transfers take place in what is known as the "everyman frequency band", in which many different radio transmitters operate - including WLAN, garage door openers, baby intercoms, weather stations, etc. Radio interference caused by these other services may cause brief dropouts or - in rare cases - even failure of the connection and such problems cannot be excluded. If problems of this kind occur frequently in your environment, we recommend that you use the Streaming Client or the USB input of the *Caruso* Blu instead of Bluetooth.

By their nature, Bluetooth transmissions always involve data reduction, and the attainable sound quality varies according to the mobile device in use, and the format of the music to be played. As a basic rule the maximum quality of music which is already stored in a data-reduced format, such as MP3, AAC, WMA or OGG-Vorbis, is worse than with uncompressed formats such as WAV or FLAC. For the highest reproduction quality we always recommend the use of the Streaming Client or the USB input of the *Caruso* Blu instead of Bluetooth.

Connections,
using the system for the first time

This section describes all those matters which are of fundamental importance when setting up and first using the equipment. This information is not relevant in daily use, but you should nevertheless read and note it before using the equipment for the first time.

Connections
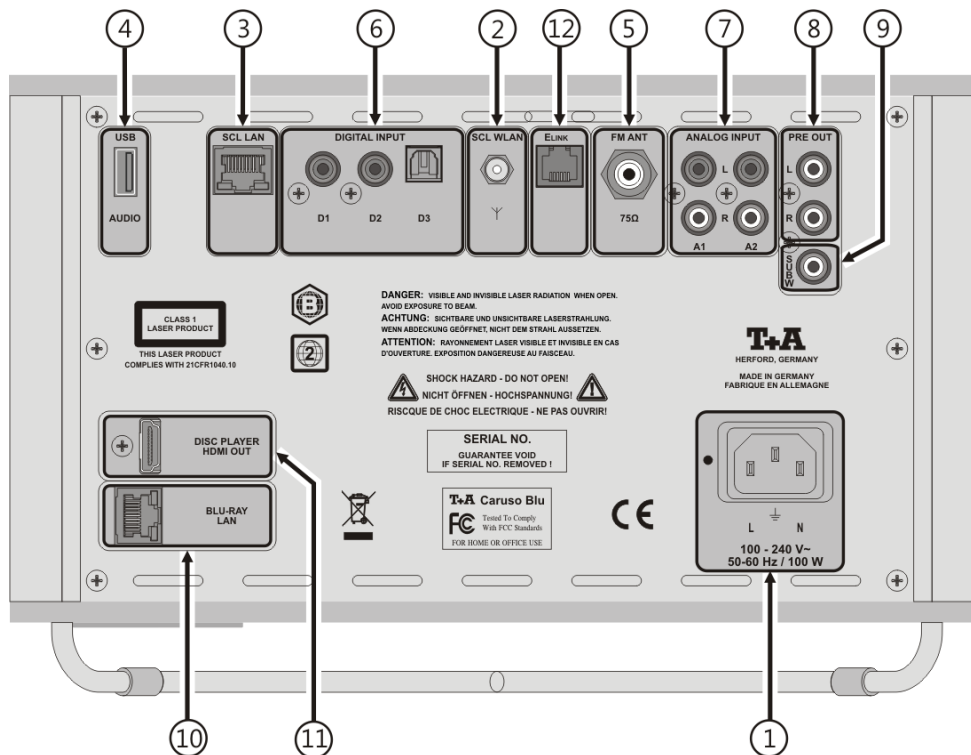
① **Mains input**

The mains lead is plugged into this socket.

For correct mains connection please read the notes in the chapters **'Using the system for the first time, Wiring'** and **'Safety Notes'**.

② **WLAN (SCL)**

Aerial socket for receiving WLAN signals.
The aerial can be screwed directly into the socket.

ⓘ **Automatic activation of the WLAN module**

Every time you switch the *Caruso* ᴮˡᵘ on, the machine checks whether it is connected to a wired Ethernet or Powerline network via its LAN socket (see below).

If it finds no connection to a wired network, the *Caruso* ᴮˡᵘ activates its WLAN module and attempts to connect to a radio network.

⚠ **Caution!**
The LAN socket must be left vacant if you are using a WLAN connection

③ **LAN (SCL)**

Socket for a wired network (LAN).

ⓘ If a LAN is connected, the LAN connection has priority, and the WLAN is disabled.

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④	**USB Audio**	Socket for a USB memory stick or an external hard disc.

Files from a medium connected to this socket are reproduced via the Streaming Client (SCL). Only audio files can be played in this way.

The storage medium must be formatted using the FAT16 or FAT32 file system

The USB storage medium can be powered directly via the USB port provided that its current drain is in accordance with the USB norm. Normalised 2.5" USB hard discs can be connected directly, i.e. without a separate mains PSU

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⑤	**FM ANT** (aerial input for FM and DAB Radio)	The *Caruso* 𝐁𝐥𝐮 features a 75 Ω aerial input **FM ANT**, which is suitable both for a normal domestic aerial and a cable connection. For first-class reception quality a high-performance, professionally installed aerial system is indispensable

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⑥	**Digital Input D1, D2, D3**	Inputs for digital source devices with optical or co-ax digital output (SP-DIF). Supported sample rates: Up to 96 kHz at D3 and 192 kHz at D1, D2.

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⑦	**ANALOG Input A1, A2**	High-level 250 mV – 2,5 V / 20 kOhm pre-amplifier input.

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⑧	**PRE OUT**	Socket for external active loudspeakers (e.g. **T+A** *CM Active*).

ⓘ **T+A** *CM Active*-loudspeakers can be switched on automatically by the *Caruso*. This is possible because the *Caruso* generates a Trigger control voltage, which must be activated in the Loudspeaker menu (see Chapter **'System Settings, Loudspeaker'**).

Other types of loudspeaker connected to these sockets should be fitted with an automatic power-on circuit. If not, you will have to switch them on and off manually.

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⑨	**SUBW**	Output socket for an active sub-woofer. The sub-woofer is optional

ⓘ If your system includes a sub-woofer, it must be switched on in the loudspeaker menu (see chapter **'System settings, Loudspeaker'**).

⚠ If **no** sub-woofer is present, it is important to disable the sub-woofer in the loudspeaker menu (see chapter **'System settings, Loudspeaker'**). The correct setting is **'Ext. sub-woofer off'**.

If the sub-woofer is not disabled in the 'Loudspeaker settings' (chapter entitled 'System settings'), the low-frequency range will be missing from the sound since no sub-woofer is present to reproduce it.

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⑩	**BLU RAY LAN**	Socket for a wired network (LAN).

ⓘ For BD Live please connect a LAN cable with internet access. If you do not wish to use BD Live, there is no need to connect a wired network.

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⑪	**DISC PLAYER HDMI OUT**	HDMI output for Plasma / LCD panel or projector. The video and audio signals of the internal Blu-ray / DVD player can be made available at this output.

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⑫	**T+A E LINK**	What is known as a **trigger signal** of **+5 V DC at 1 kOhm impedance** is present at this socket? Other makes of active loudspeaker can also be switched on and off reliably by this means. The pin assignment for this socket can be found in the "**Use with active speakers**" chapter.

Installation and wiring

Carefully unpack the unit and store the original packing material carefully. The carton and packing are specially designed for this unit and will be needed again if you wish to move the equipment at any time.

If you have to transport the device, it must always be carried or sent in its original packaging in order to prevent damage and defects.

If the unit gets very cold (e. g. when being transported), condensation may form inside it. Please do not switch it on until it has had plenty of time to warm up to room temperature, so that any condensation evaporates completely.

If the device has been in storage, or has not been used for a protracted period (> two years), it is essential to have it checked by a specialist technician before re-use.

Before placing the unit on sensitive laquer or wood surfaces please check the compatibility of the surface and the unit's feet on a non visible point and if necessary use an underlay. We recommend a surface of stone, glass, metal or the like.

The unit should be placed on a rigid, level base (See also chapter **"Safety notes"**). When placing the unit on resonance absorbers or anti-resonant components make sure that the stability of the unit is not reduced.

The unit should be set up in a well ventilated dry site, out of direct sunlight and away from radiators.

The unit must not be located close to heat-producing objects or devices, or anything which is heat-sensitive or highly flammable.

Mains and loudspeaker cables, and also remote control leads must be kept as far away as possible from signal leads and antenna cables. Never run them over or under the unit.

(i) Notes on connections:

A complete connection diagram is shown in **'Appendix A'**.

- Be sure to push all plugs firmly into their sockets. Loose connections can cause hum and other unwanted noises.

- When you connect the output sockets of the source device to the output sockets of the *Caruso* Blu always connect like to like, i. e. **'R'** to **'R'** and **'L'** to **'L'**. If you fail to heed this then the stereo channels will be reversed.

- The device is intended to be connected to mains outlet with protective earth connector. Please connect it only with the mains cable supplied to a properly installed mains outlet with protective earth connector.

- To achieve maximum possible interference rejection the mains plug should be connected to the mains socket in such a way that phase is connected to the mains socket contact marked with a dot (●). The phase of the mains socket can be determined using a special meter. If you are not sure about this, please ask your specialist dealer.

We recommend the use of the **T+A** **'POWER THREE'** ready-to-use mains lead in conjunction with the **'POWER BAR'** mains distribution panel, which is fitted with a phase indicator as standard.

When you have completed the wiring of the system please set the volume control to a very low level before switching the system on.

The screen on the *Caruso* Blu should now light up, and the unit should respond to the controls.

If you encounter problems when setting up and using the amplifier for the first time please remember that the cause is often simple, and equally simple to eliminate. Please refer to the section of these instructions entitled **'Trouble shooting'**.

Loudspeaker and signal cables

Loudspeaker cables and signal cables (inter-connects) have a significant influence on the overall reproduction quality of your sound system, and their importance should not be under-estimated. For this reason **T+A** recommends the use of high-quality cables and connectors.

Our accessory range includes a series of excellent cables and connectors whose properties are carefully matched to our speakers and electronic units, and which harmonise outstandingly well with them.

For difficult and cramped situations the **T+A** range also includes special-length cables and special-purpose connectors (e. g. right-angled versions) which can be used to solve almost any problem concerning connections and system location.

Mains cables and mains filters

The mains power supply provides the energy which your sound system equipment needs, but it also tends to carry interference from remote devices such as radio and computer systems.

Our accessory range includes the specially shielded **'POWER THREE'** mains cable and the **'POWER BAR'** mains filter distribution board which prevent electro-magnetic interference from entering your Hi-Fi system. The reproduction quality of our systems can often be further improved by using these items.

If you have any questions regarding cabling please refer to your specialist **T+A** dealer who will gladly give you comprehensive expert advice without obligation. We would also be happy to send you our comprehensive information pack on this subject.

Changing the batteries

Locate the point indicated by the arrow in the left picture, and open the battery compartment by pressing it in and simultaneously sliding back the battery cover. Insert three batteries of the **LR 03 (MICRO)** type in the battery compartment, as shown in the engraved diagram. Please note: it is essential to **replace all three batteries at the same time.**
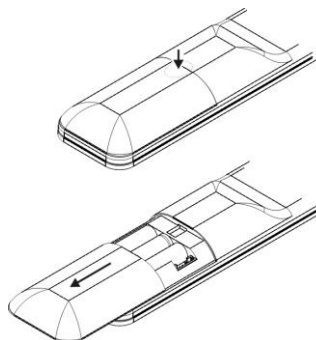
⚠ **Caution!**
Batteries shout not be exposed to excessive heat like sunshine, fire or the like.

ⓘ **Disposing of exhausted batteries:**

Exhausted batteries must never be thrown into the household waste! They should be returned to the battery vendor (specialist dealer) or your local toxic waste collection point, so that they can be recycled or disposed in a proper way. Most local authorities provide collection centres for such waste, and some provide pick-up vehicles for old batteries.

Care of the unit

Disconnect the mains plug at the wall socket before cleaning the case.
The surfaces of the case should be wiped clean with a soft, dry cloth only.
Never use solvent-based or abrasive cleaners!
Before switching the unit on again, check that there are no short-circuits at the connections, and that all cables are plugged in correctly.

Storing the unit

If the device has to be stored, place it in its original packaging and store it in a dry, frost-free location. Storage temperature range 0...40 °C

Safety notes

For your own safety please consider it essential to read these operating instructions right through, and observe in particular the notes regarding setting up, operation and safety.

Installation

Please consider the weight of the device. Never place the device on an unstable surface; the machine could fall off, causing serious or even fatal injury. Many injuries, especially to children, can be avoided if the following simple safety precautions are observed:

- Use only such items of furniture which can safely bear the weight of the device.
- Ensure that the device does not project beyond the edges of the supporting furniture.
- Do not place the device on tall furniture (e.g. bookshelves) without securely anchoring both items, i.e. furniture and device.
- Explain to children the hazards involved in climbing on furniture to reach the device or its controls.

When installing the unit on a shelf or in a cupboard it is essential to provide an adequate flow of cooling air, to ensure that the heat produced by the unit is dissipated effectively. Any heat build-up will shorten the life of the unit and could be a source of danger. Be sure to leave free space of 10 cm around the unit for ventilation.

If the system components are to be stacked then the amplifier must be the top unit. Do not place any object on the top cover.

The unit must be set up in such a way that none of the connections can be touched directly (especially by children). Be sure to observe the notes and information in the section **'Installation and Wiring'**.

Connection

The terminals (marked with the ⚠-symbol) can carry high voltages.
Always avoid touching terminals and sockets and the conductors of cables connected to them. Unless ready-made cables are used, all cables connected to these terminals and sockets must always be deployed by a trained person.

Power supply

The device is intended to be connected to mains outlet with protective earth connector. Please connect it only with the mains cable supplied to a properly installed mains outlet with protective earth connector.
The power supply required for this unit is printed on the mains supply socket. The unit must never be connected to a power supply which does not meet these specifications. If the unit is not to be used for a long period disconnect it from the mains supply at the wall socket.

Mains leads / Mains plug

Mains leads must be deployed in such a way that there is no danger of damage to them (e. g. through persons treading on them or from furniture). Take particular care with plugs, distribution panels and connections at the device.

Unplugging the mains plug will disconnect the device from the mains for service and repair. Please make sure that the mains plug is easily accessible.

Enclosure openings

Liquid or particles must never be allowed to get inside the unit through the ventilation slots. Mains voltage is present inside the unit, and any electric shock could cause serious injury or death. Never exert undue force on mains connectors.
Protect the unit from drips and splashes of water; never place flower vases or fluid containers on the unit.
Do not place naked flame sources, such as candle lights on the device.

Supervision of device operation

Like any other electrical appliance this device should never be used without proper supervision. Take care to keep the unit out of the reach of small children.

Service, Damage

The case should only be opened by a qualified specialist technician. Repairs and fuse replacements should be entrusted to an authorised **T+A** specialist workshop. With the exception of the connections and measures described in these instructions, no work of any kind may be carried out on the device by unqualified persons.

If the unit is damaged, or if you suspect that it is not functioning correctly, immediately disconnect the mains plug at the wall socket, and ask an authorised **T+A** specialist workshop to check it.

Over voltage	The unit may be damaged by excess voltage in the power supply, the mains circuit or in aerial systems, as may occur during thunderstorms (lightning strikes) or due to static discharges.
	Special power supply units and excess voltage protectors such as the **T+A 'Power Bar'** mains distribution panel offer some degree of protection from damage to equipment due to the hazards described above.
	However, if you require absolute security from damage due to excess voltage, the only solution is to disconnect the unit from the mains power supply and any aerial systems.
	To avoid the risk of damage by overvoltages we recommend to disconnect all cables from this device and your HiFi system during thunderstorms.
	All mains power supply and aerial systems to which the unit is connected must meet all applicable safety regulations and must be installed by an approved electrical installer.
Approved usage	The device is designed to operate in a temperate climate and altitudes up to 2000 m above sea level. The range of permissible operating temperatures is +10 … +35°C. This device is designed exclusively for reproducing sound and/or pictures in the domestic environment. It is to be used in a dry indoor room which meets all the recommendations stated in these instructions.
	Where the equipment is to be used for other purposes, especially in the medical field or any field in which safety is an issue, it is essential to establish the unit's suitability for this purpose with the manufacturer, and to obtain prior written approval for this usage.
Approval and conformity with EC directives	In its original condition the unit meets all currently valid European regulations. It is approved for use as stipulated within the EC.
	By attaching the CE symbol to the unit **T+A** declares its conformity the EC directives and the national laws based on those directives. The declaration of conformity can be downloaded from **www.ta-hifi.com/DoC**.
	The original, unaltered factory serial number must be present on the outside of the unit and must be clearly legible! The serial number is a constituent part of our conformity declaration and therefore of the approval for operation of the device. The serial numbers on the unit and in the original **T+A** documentation supplied with it (in particular the inspection and guarantee certificates), must not be removed or modified, and must correspond.
	Infringing any of these conditions invalidates **T+A** conformity and approval, and the unit may not be operated within the EC. Improper use of the equipment makes the user liable to penalty under current EC and national laws.
	Any modifications or repairs to the unit, or any other intervention by a workshop or other third party not authorised by **T+A**, invalidates the approval and operational permit for the equipment.
	Only genuine **T+A** accessories may be connected to the unit, or such auxiliary devices which are themselves approved and fulfil all currently valid legal requirements.
	When used in conjunction with auxiliary devices or as part of a system this unit may only be used for the purposes stated in the section **'*Approved usage*'**.
Disposing of this product	The only permissible method of disposing of this product is to take it to your local collection centre for electrical waste.
FCC Information to the user	**Class B digital device – instructions:**

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different form that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

System settings (System Configuration Menu)

The System Configuration menu is used for adjusting the general settings of the machine. This menu is described in detail in the following chapter.

Calling up and operating the menu

- The menu is called up by briefly pressing the (SYS/☉) button on the front panel or the remote control handset.
- Once the menu is open, the following select points appear on the screen:

Adjustment facility			
Tone	Settings		
Source configuration	Configuration		
Speaker	Configuration		
Audio delay	0 ms	...	170 ms
Brightness	1	...	7
Language	English	Deutsch	Francaise	further languages
Device name	T+A Caruso Blu		
Standby mode	App	Comfort	Off
Device info	Display		

- Use the (▲) / (▼) buttons to select a menu point.
- If you wish to change a selected menu point, first press the (OK) button, then change the value using the (◄) / (►) buttons.
- To accept the change, press the (OK) button again after altering the setting.
- To quit **without** accepting a changed value, you can interrupt the procedure at any time by pressing the (■) button.
- Press the (SYS) button again to leave the menu.

Menu point Tone

Using this menu point you can access the Tone menu by pressing the buttons on the *Caruso Blu*.

ⓘ This menu can also be called up directly by pressing the (♪) button on the **FM100** remote control handset.

Menu point Source configuration

When you call up this menu point using the (OK) button, a list of all the external sources of the *Caruso Blu* appears. You have the opportunity to alter external sources.

Sub-point TV

Some TV sets feature optical (TOSLINK) digital outputs. If you wish to use the *Caruso Blu* with such a set, you can assign the optical digital input **D3** to the TV source of the *Caruso Blu* instead of the analogue sound input **A2**. In this case the *Caruso Blu* accepts and processes the digital stereo signal (PCM signal) from the source device instead of the analogue signal. Set the input matching your TV set at this point.

ⓘ If a digital input (e.g. **D3**) is assigned to the TV source, then that input is no longer available as a separate source.

Sub-point Auto power-on

This menu point enables you to automatically switch on the *Caruso Blu* due to the automatic power-on function.
If this function is switched on, the *Caruso Blu* automatically switches itself on from standby mode, and switches to the selected source (if necessary), when a music signal is present at the **A1, A2, D1 ,D2, or D3** input - depending on the input to which the auto power-on source is assigned.
If the *Caruso Blu* is switched on, but no signal is detected at the auto power-on input within about twenty minutes, then the *Caruso Blu* automatically switches itself off again; however this only occurs if the auto power-on source is selected.
In this mode of operation the volume control for the selected source is separate, i.e. the volume level for this source is stored separately, and only changes when the auto power-on source is selected.
This makes it possible to pre-set a fixed volume at the *Caruso Blu*, and to control the volume, for example, using the TV set connected to the system.
Of course, the volume can also be controlled using the *Caruso Blu*, and the TV set left at a fixed level.

ⓘ The auto power-on function is only supported in 'Comfort standby' or 'App standby".

Source setting	At this menu point you can activate and disable external sources, and assign a plain text name to each source; this name then appears in the screen displays. For example, you might wish to assign the display name *"Media Centre PC"* to the coax D 1 input.
	Each source is followed by the assigned name, or if you have disabled the source concerned the note **'disabled'**.
	If you want to activate / disable a source, or change the plain text name, navigate to the appropriate line.
	To activate a source, press the green ⊙ button; pressing the red ⊗ button disables the source.
	To change the plain text name, press the OK button once more. Change the name as you wish, then press OK to confirm your choice. This action stores the settings for the source. If necessary, the display name can be changed as often as you wish. When the name input process is complete, press the OK button to store it.
	A name can only be entered for external source devices, i.e. those connected to the following inputs of the *Caruso Blu*:
	Analogue A1, A2, Digital D1, D2, TV.

ⓘ When you call up Source Select using (A1/AUD) / ☐ on the remote control handset or the source buttons on the front panel, any disabled sources are suppressed. This makes it easier to select sources, and we recommend that you disable any sources not in use.

Sub-point **Input level**	The input sensitivity of the analogue inputs can be adjusted to the output level of the source devices connected to the system. This facility ensures that the volume level is the same for all sources. The default setting for input sensitivity is 2.0 V (high level).
	If the connected source is being played too quiet, adjust the input sensitivity to a lower value. The adjustment is correct when the volume is about the equivalent of the built-in FM radio.

Menu point **Speaker** (Loudspeaker menu)	Activating this menu point calls up additional on-screen menu points which relate to the loudspeakers.

Sub-point **Loudspeakers**	Choosing the menu point Caruso + External selects a 3.x configuration; in this mode the *Caruso Blu* should be set up as the Centre speaker.

Sub-point **Ext. Subwoofer**	Selecting the menu point 'Caruso' in the Loudspeaker sub-point, and setting the menu point '**On**' in the Sub-woofer sub-point, switches off the integral bass loudspeaker.

Sub-point **Crossover freq**	This menu point only appears if you have selected "External" or "Caruso + external" in the Loudspeaker sub-menu, and the sub-woofer is switched on.

ⓘ If you are using satellite speakers in combination with a subwoofer, choose a cross-over frequency of 40Hz, 60Hz, 100Hz or 150Hz, depending on the size and bass performance of your loudspeakers.
This is the basic rule: the smaller the speaker cabinet, the higher the cross-over frequency should be

Sub-point **T+A active spk auto on**	At this point you can switch the Trigger voltage for **T+A** active loudspeakers on and off.
	If you set the trigger voltage option to 'On', then **T+A** *M Active* loudspeakers connected to the PRE output of the *Caruso Blu* are switched on together with the *Caruso Blu*. This avoids the usual problem with automatic power-on systems: that of "swallowing" the first few beats of the music.
	If you connect different (active) loudspeakers or output stages to the unit, the trigger voltage should be set to 'Off'.

ⓘ A list of compatible **T+A active loudspeakers** can be found in the chapter entitled "**Miscellaneous / Use with active speakers**".

Menu point **Sound delay**	Every video monitor requires a certain amount of time to display the video signals (latency); this period may vary from monitor to monitor. If your monitor has a long latency, the result may be a perceptible time-lag between the picture and the sound. This is usually apparent when lip movements are not properly synchronised with the soundtrack. To compensate for this effect the *Caruso* Blu features a digital sound delay module (Lip-sync) which can be used to synchronise picture and sound reproduction. If necessary, set a delay time in this menu point which corresponds to your video monitor. If the latency of your monitor is not stated in its Specification, you will need to determine the appropriate value experimentally, e.g. by playing a DVD in the original speech version (non-synchronised version). During playback simply adjust the value for sound delay until the speaker's lip movements coincide with the sound.
Menu point **Brightness** (Screen Brightness)	At this point you can adjust the brightness of the *Caruso* Blu's integral screen to suit your personal preference in normal use. Seven levels are available.
Menu point **Language**	In this menu point it is possible to determine the language which is to be used for the displays on the integral screen on the front panel of the *Caruso* Blu.

ⓘ The language used for any transferred data, e.g. from an Internet radio station, is determined by the device itself or the radio station, and therefore **cannot** be selected on the *Caruso* Blu.

Menu point **Device name**	This menu point can be used to assign an individual name to the *Caruso* Blu. In a home network the device then appears under this name.
Menu point **Standby mode**	The *Caruso* Blu features several stand-by modes, enabling you to set the most economical energy consumption mode for your particular usage. The following settings are available. Stand-by mode "Off" Power consumption is < 0.4 Watt. The stand-by current drain is reduced to a minimum by switching off all non-essential functions. In this mode the *Caruso* Blu can be switched on using the ⬭ON button on the front panel, or the remote control handset. "Comfort" stand-by mode Power consumption is between 2 Watt and 6.5 Watt, depending on the screen brightness you have set. In Comfort mode the following additional functions are available: Alarm timer with time of day display Automatic clock setting (VHF-RDS) Auto power-on (see "**System settings / Source settings**" chapter). "App" stand-by mode Power consumption is max. 8 Watt at full screen brightness; this mode consumes most energy when the device is switched off. In addition to the facilities of "Comfort" stand-by mode, the *Caruso* Blu can be switched on and off via the network using the **T+A Control App**.

ⓘ For information on energy-saving operation, and accurate information on current drain in the various operating modes, please refer to the Chapter entitled **'Notes on Energy Saving'** and the Specification in the Appendix.

Menu point **Device info**	At this menu point you will find information on the status of the installed software and the factory reset. At the sub point "update" it is possible to initiate a firmware update.

Network Configuration

General Information

The *Caruso Blu* can be operated in wired LAN networks (*Ethernet LAN* or *Powerline LAN*) or in wireless networks (*WLAN*).

If you wish to use your *Caruso Blu* in your home network, you must first enter the necessary network settings on the *Caruso Blu*. This includes entering the network parameters such as the IP address etc. both for wired and wireless operation. If you wish to use a wireless connection, a number of additional settings for the WLAN network also have to be entered.

Please refer to the Chapter **'Glossary / Additional Information' and 'Network Terms'** for additional explanations of terminology relating to network technology.

ⓘ **In the following sections we assume that a working home network** (cable network of WLAN network) **with router and (DSL) Internet access is present.** If you are unclear about some aspect of installing, setting up and configuring your network, please address your queries to your network administrator or a network specialist.

Compatible hardware and UPnP servers

The marketplace offers a vast number of routers, NAS devices and USB hard discs made by a very wide range of manufacturers. **T+A** equipment is generally compatible with other makes of machine which bear the UPnP label. A list of devices which **T+A** has checked for compatibility can be found on the Internet at: http://www.taelektroakustik.de/hardware/comp_lan_hw.pdf.

Network Configuration Menu

All network settings are entered in the Network Configuration menu. This menu will vary slightly in appearance depending on the type of your network, i.e. whether you have a wired (LAN) or wireless (WLAN) network.

If the *Caruso Blu* detects a LAN connection to a network when you switch it on, the machine will assume that this is to be used, and displays the network configuration menu for LAN networks.

If no LAN network is connected, the *Caruso Blu* activates its WLAN module and displays the WLAN configuration menu when you call up the configuration menu. The menu for a WLAN network includes a number of additional menu points. The following sections explain how to use the menu, and the meaning of the individual menu points.

ⓘ The Network IF Mode 'auto' is the default factory setting. In case of problems in combination with your hardware this automatic function can be switched to a fixed operation mode, e.g. only LAN.

**Opening the Network
Configuration Menu**

First select the *Caruso Blu* Streaming Client function by pressing the ⬭SCL⬭ button.

Open the configuration menu with a long press on the ⬭SRC⬭ button on the FM100 remote control handset. You should now see the configuration menu on the front panel screen.

**Operating the Menu,
Changing and Storing
IP Addresses**

Use the ⬭▲⬭ / ⬭▼⬭ buttons in the menu to select the network parameter to be changed, and activate the entry with the ⬭OK⬭ button.

You can now change the setting using the following buttons, depending on the type of setting:

⬭◄⬭ / ⬭►⬭ button   for simple selection (ON / OFF)

Numeric buttons ⬭0⬭ to ⬭9⬭   for entering IP addresses

Alpha-numeric input   for entering text

When the setting process is complete, or when you have entered the complete address, press the ⬭OK⬭ button to confirm your action.

Alpha-numeric entry

At certain points, e.g. for entering server names or passwords, it is necessary to input series of characters (strings). At such points you can enter letters, numbers and special characters by repeatedly pressing the numeric buttons on the **FM100** remote control handset, as when writing SMS news. The assignment of letters to the buttons is printed below the buttons. Special characters can be accessed using the ⬭0⬭ and ⬭1⬭ buttons:

⬭0⬭   ⊔ 0 + - * / ^ = { } ( ) [ ] < >

⬭1⬭   . , ? ! : ; 1 \ " ' _ @ $ % & # ~

Use the blue ⬭▲▼⬭ button for toggling between numbers, capitals and lower-case letters. The bottom line of the screen shows which input mode is currently selected.

ⓘ At certain points (e.g. DNS server name) it is possible to enter both an alpha-numeric string and an IP address. At these points an IP address should be entered like a string (with separating dots as special characters). In this case an automatic check for valid address ranges (0 … 255) is not carried out.

Closing the Menu

Once you have correctly set all the parameters, select the menu point **'Save and Restart'**, then press the ⬭OK⬭ button. This action causes the *Caruso Blu* to accept the settings, and the machine restarts with the new network settings. After the restart you should see the available network media sources (Internet radio, UPnP-AV server, etc.) displayed in the main menu.

**Interrupting the Menu
without Storing the Settings**

At any time you can leave the network configuration menu without making any changes to the network settings: this is done by pressing the ⬭■⬭ button, which takes you to the menu point **'Exit without saving'**. Pressing the ⬭OK⬭ button at this juncture interrupts and closes the menu.

The Configuration for a Wired Ethernet LAN or Power-Line LAN connection

Setting the Parameters for a Wired Network

- Connect the *Caruso* Blu to an operational network or Power-Line modem using the LAN socket on the back panel.
- Switch the *Caruso* Blu on, and select the Streaming Client function by pressing the (SCL) button.
- Call up the Configuration menu as described above. You should now see the menu reproduced below, displaying the network parameters. In the title line the message **'LAN'** should appear, indicating that the machine is connected to a wired LAN. If you see **'WLAN'** at this point instead, please check your network connection, and ensure that the network is switched on and operational.
- You can now select the individual menu points and adjust them to match your network conditions. The illustration below shows the possible button inputs after each menu point.

Possible entries

Network Parameter (LAN)		
MAC	00:0e:9b:cc:a4:35	none
→ DHCP	Off	◁ / ▷
Device IP	192.168.0.10	(0 ... 9)
IP mask	255.255.255.0	(0 ... 9)
Gateway IP	192.168.0.1	(0 ... 9)
DNS 1	192.168.0.1	(0 ... 9, A ... Z)
DNS 2	0.0.0.0	(0 ... 9, A ... Z)
Proxy	XXX	◁ / ▷
Proxy IP	192.168.0.1	(0 ... 9, A ... Z)
Proxy port	8080	(0 ... 9)
Geräte Name	Caruso Blu	(0 ... 9, A ... Z)
Network IF Mode	Auto	◁ / ▷
Save and restart	Apply	(OK)
Exit without saving	Apply	(OK)

◁ / ▷ : Switching ON / OFF
(0...9): Numeric input, separating dots are automatically generated; input limited to valid addresses
(0...9, A...Z): Alpha-numeric input and special characters.
 IP - separating dots must be entered as special characters.

ⓘ The parameters illustrated above are only typical values.
Addresses and settings may require different values for your network.

Menu Point	Description
MAC	The MAC address is a hardware address which uniquely identifies your machine. The address displayed is determined by the manufacturer, and cannot be altered.
DHCP	**ON** If your network includes a DHCP server, please select the ON setting at this point. In this mode an IP address is automatically assigned to the *Caruso Blu* by the router. The screen shows only the MAC address and the message DHCP state ON. In this case the address input fields shown in the illustration do not appear in the menu. **OFF** If your network does not include a DHCP server, please select the OFF setting. In this mode you must configure the following network settings manually. Please ask your network administrator for the addresses to be entered for your network.
Device IP	IP address of the *Caruso Blu*
IP mask	Network mask
Gateway IP	IP address of the router
DNS 1	Name / IP of the name server (optional)
DNS 2	Alternative name server (optional)
Proxy state	**ON** if a proxy server is present, otherwise **OFF**
Proxy IP	Address of the proxy server
Proxy port	Port number of the proxy server
Dev. Name	User-selected name under which the device appears in the network
Network IF Modus	Network setting: only WLAN, only LAN or automatic setting
	ⓘ The Network IF Mode 'auto' is the default factory setting. In case of problems in combination with your hardware this automatic function can be switched to a fixed operation mode, e.g. only LAN.
Save and Restart	Stores the network parameters, and restarts the *Caruso Blu* with the new settings.
Exit without saving	Closes the menu: data already entered is discarded.

The Configuration for a WLAN connection

Setting the Parameters for a Radio Network

- Connect the WLAN aerial (supplied) to the *Caruso Blu* WLAN aerial socket, and ensure that no cable is attached to the *Caruso Blu* LAN socket.
- Switch the *Caruso Blu* on, and select the Streaming Client function by pressing the (SCL) button.
- Now call up the Configuration menu as described above: with a long press on the (SRC) button. You should now see the menu reproduced below, displaying the network parameters.

Possible entries

Network Parameter (WLAN)		
MAC	00:0e:9b:cc:a4:35	
→ WLAN configuration	start	none
DHCP	Off	(◄) / (►)
Device IP	192.168.0.10	(0 ... 9)
IP mask	255.255.255.0	(0 ... 9)
Gateway IP	192.168.0.1	(0 ... 9)
DNS 1	192.168.0.1	(0 ... 9, A ... Z)
DNS 2	0.0.0.0	(0 ... 9, A ... Z)
Proxy	XXX	(◄) / (►)
Proxy IP	192.168.0.1	(0 ... 9, A ... Z)
Proxy port	8080	(0 ... 9)
Geräte Name	Caruso Blu	(0 ... 9, A ... Z)
Network IF Mode	Auto	(◄) / (►)
Save and restart	Apply	(OK)
Exit without saving	Apply	(OK)

Searching for and Selecting the Network

First select the menu point **'WLAN configuration start'**, and activate it by pressing the (OK) button.
A menu appears showing these points:
- Rescan   -   initiates new search for accessible radio networks
- Set manually   -   adding a WLAN manually

After a brief delay the networks present in the vicinity are listed on the screen.

List of WLANs
→ Rescan
Set manually
XXXXX (name of network)
(1/3)

You can use the 'Rescan' function to start a new search for networks present in the vicinity.
Please select one of the networks located, and activate it by pressing the (OK) button.

Entering the Password (for encoded networks)

WLAN	
→ Passphrase	.....
Save	Apply
(1/2)	

If your network is encoded, the window illustrated above now appears. Please enter the network password and confirm the entry by pressing (OK). Now select the point 'Save WLAN settings' and confirm with (OK).

ⓘ If a WEP code is used, the password must be entered as a hexadecimal code (0 - 9, A - F).

Please enter the settings for the remaining network parameters as described earlier in the section entitled **'Setting the Parameters for a Wired Network'**.

**Storing Network Settings
and Restarting**

Finally select the menu point 'Save and Restart', and press the ⬭OK⬭ button; this action accepts the settings, and restarts the *Caruso* Blu with the new settings.

Special case:
Manual Network Entry

The *Caruso* Blu automatically searches for accessible radio networks, and lists them when you call up the menu point 'WLAN Configuration'. However, the *Caruso* Blu can only locate networks which broadcast their SSID network identity. For security reasons many radio networks do not transmit the SSID (if you are not sure about this, ask your network administrator). In such cases the network cannot be found and displayed automatically, i.e. it must be set up manually. This is the purpose of the menu point 'Set Manually'. If you select this menu point, you will see the input window reproduced below; you can enter the parameters for your network at this point.

```
WLAN
 → Name / SSID                              ▢
   Security                            NONE
   Passphrase                          .....
   Save                                Apply

   (1/4)
```

After successfully entering all the data, please select the point 'Save WLAN Settings', and confirm by pressing the ⬭OK⬭ button. Your *Caruso* Blu now accepts the data you have entered relating to the WLAN network, and moves on to the subordinate menu in which you can set the remaining network parameters, as described earlier in the section entitled **'Setting the Parameters for a Wired Network'**.

You can now leave the Configuration menu by selecting the menu point 'Save and restart'.

Disc Player Setup-Menu (Settings)

Blu-ray disc player settings

Opening and operating the Settings menu

To open the Settings menu, stop playback.
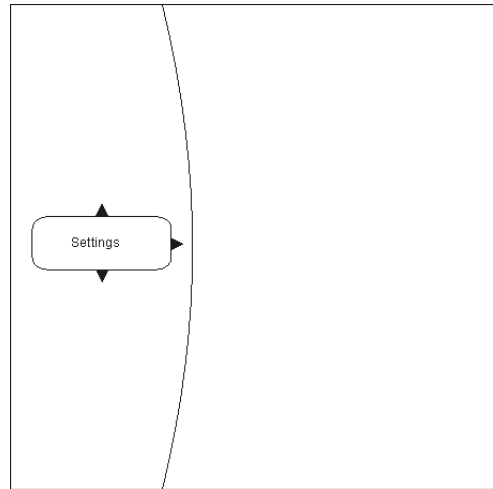
Navigating to the Settings menu point

Use the ▼ / ▲ buttons to select the Settings entry in the main menu.
You will now see the various sub-categories of the 'Settings' menu.
The selected category is highlighted, and the current settings in this category are displayed:
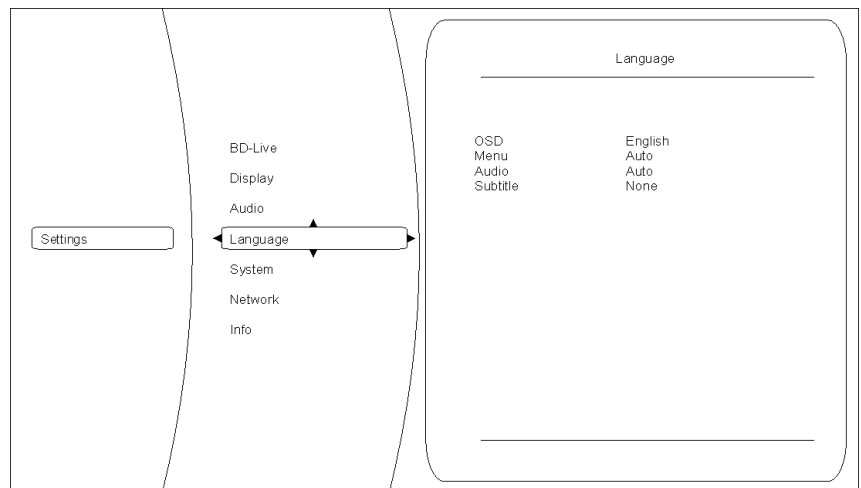
In this example the Language category is selected, with the current settings displayed on the right.
You can select a different category (e.g. Language, System, ...) by pressing ▼ / ▲.

If you wish to change settings within the selected category, please press (▶) again.
The various options in the selected category are now displayed, and you can select the setting you wish to alter using the ▼ / ▲ buttons.
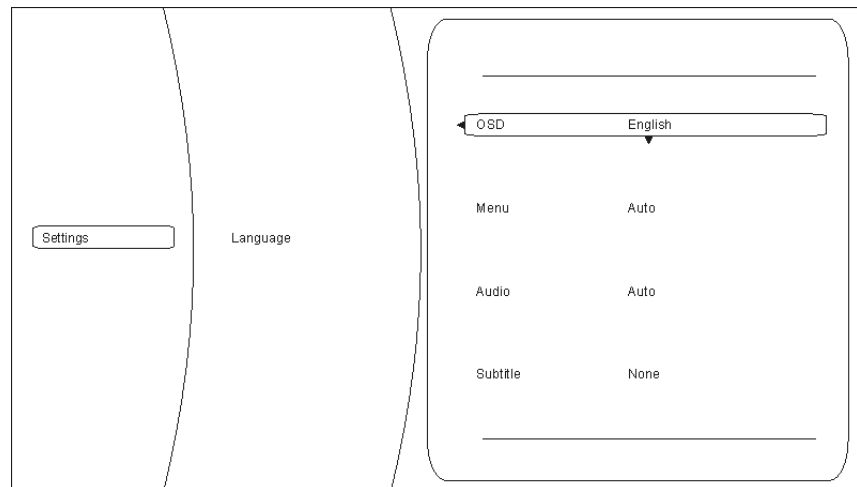
In this example the option **'OSD'** is selected, and **'Deutsch'** (German) selected as a possible setting.

If you wish to change the set value for the selected option, please press the OK button. The available options are displayed in the Settings window.
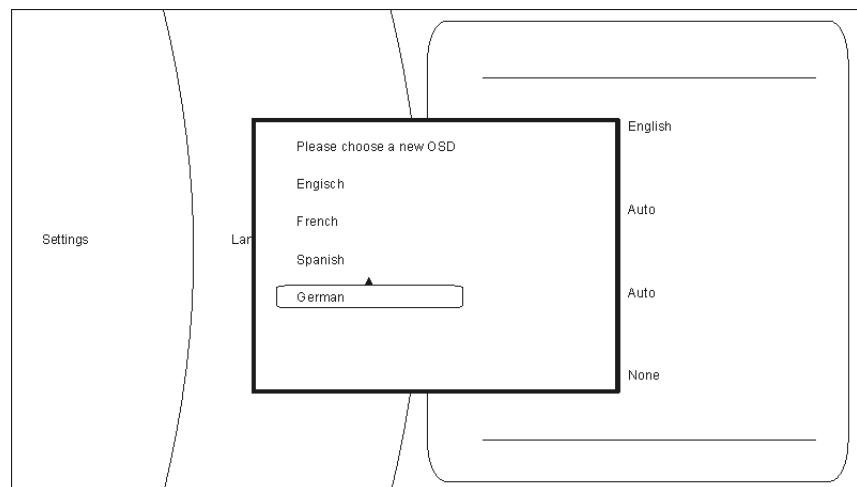
You can now select a different setting (e.g. English) by pressing the ▼ / ▲ button, followed by OK to accept and store the value.

The Setup menu contains the following categories:

- Display
- Language
- System
- Network
- Info
- BD-Live

These categories are described in greater detail in the following sections.

Display category

Please select the 'Display' category if you wish to set the optimum values for the video output.

Overview
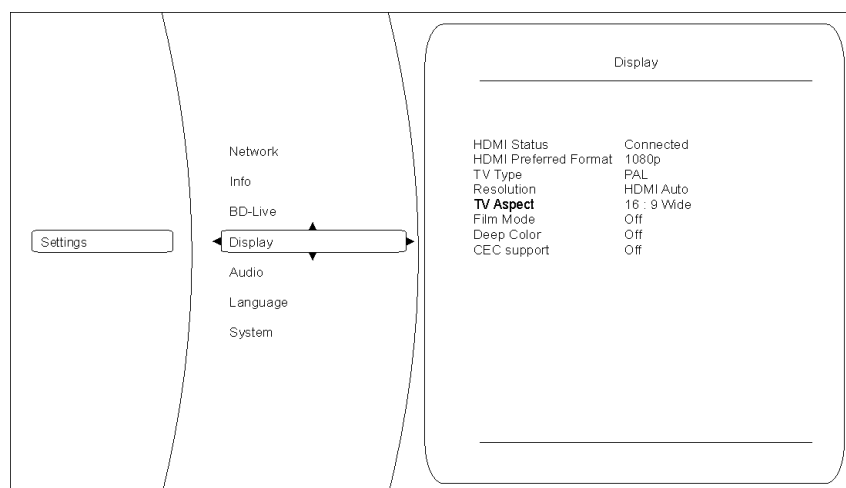
Colour system

Please set the video norm for your display device at this point.
NTSC: Video output at 60 Hz
PAL: Video output at 50 Hz

ⓘ **Incorrect settings may result in a jerky and incorrect display.**

Resolution

At this point you should set the maximum resolution of the display device connected to your system. For accurate information on the maximum resolution of your display device please refer to the operating instructions supplied with the unit.

The following resolutions are available:

Resolution	Display devices e
HDMI auto	The *Caruso* Blu automatically selects the optimum setting for the display device connected to the system. **This is the recommended setting, which should always be used if possible.** **You can try out one of the other settings to see if it suits your television, but only if the AUTO setting causes picture problems with your TV.**
1080p	Your display device is capable of full HDTV resolution (full HD).
1080i	The display device connected to the system is a high-definition device (HDTV) which can only be used at 1080i resolution.
720p	The display device connected to the system is a high-definition device (HDTV) such as an LCD or Plasma flat screen designated 'HD-ready'.
576p	The display device connected to the system is a standard-definition device which can also process progressive signals (SDTV).
576i	The display device connected to the system is a standard-definition device (SDTV) for NTSC / PAL (e.g. conventional CRT television)

ⓘ At any setting apart from AUTO you must also set the frame rate under "Colour system" to match the disc in use.
PAL-DVD :=   PAL (50 Hz),
NTSC-DVD :=   NTSC (60 Hz)
Blu-ray :=   PAL or NTSC - according to the disc.
                            (For Blu-Ray, in most cases it is NTSC / 60 Hz)

If you set the wrong frame rate, picture reproduction may be jerky.

Picture aspect ratio

At this point you can determine the aspect ratio (16:9 / 4:3) of the display device connected to your system.

The possible formats are:

- 16:9 widescreen
- 16:9 pillar-box
- 4:3 letterbox
- 4:3 pan & scan

Please select the appropriate setting from the table below:

ⓘ If you select the 16:9 setting when the display device connected to the system is a 4:3 type, you may find that no picture is displayed at all.

	Aspect ratio of the display device			
	16:9		**4:3**	
	16:9 widescreen	16:9 pillar-box	4:3 letterbox	4:3 pan & scan
Disc content				
Film in widescreen format (16:9)	The picture is unchanged, and is displayed filling the screen	No effect – the picture is unchanged, and is displayed filling the screen	The picture is unchanged, and displayed full-width, leaving horizontal black bars above and below the picture.	The picture is unchanged, and displayed full-height. The right and left-hand edges of the picture are not shown.
Film in 4:3 format	The picture is stretched horizontally, and displayed filling the screen	The picture is unchanged, and is displayed centrally, leaving vertical black stripes on both sides of the picture.	No effect – the picture is unchanged, and is displayed filling the screen.	No effect – the picture is unchanged, and is displayed filling the screen.

Film mode

This setting allows you to define whether your display device is capable of processing film material directly at 24 frames per second.

Cinema films are usually recorded at a speed of 24 frames per second, and many movies are also present on Blu-ray discs in this format. However, not all display devices can process this format directly. It is important that you select the correct setting for your display device:

On: Your display device is connected via HDMI, and can process film material directly in the 24 fps (frames per second) format.

Off: Your display device cannot directly process film material in the 24 fps (frames per second) format (e.g. conversion to 25 / 30 fps or 50 / 60 fps is required).

ⓘ Selecting an incorrect setting may result in no picture on your display device!

ⓘ The setting selected here is only effective:
- if the resolution is set to 1080p / HDMI auto,

and
- if the film material was recorded at 24 fps.

Deep Colour

This setting enables you to decide whether the picture to be transferred via the HDMI output features expanded colour range (Deep Colour). The expanded colour range allows for finer graduations in the colours to be displayed, which in turn permits higher contrast values and better colour blends.

Please select the appropriate setting to suit your display device:

On: your display device is connected via HDMI and is capable of processing Deep Colour.

Off: your display device cannot process Deep Colour.

CEC support

The CEC function enables your TV set's remote control handset to operate the basic functions of the *Caruso* Blu's disc mechanism.

If you wish to make use of this function, please ensure that the TV set connected to the system supports the CEC function.
It is not possible to guarantee that the system works perfectly with all TV sets, since manufacturers' implementations of the CEC function vary.
If you find that the system malfunctions due to incompatibility problems, we recommend that you switch this function off.

Leaving the category

When you have entered all the correct settings in the category, you can leave it by pressing the ◀ button.

Audio category

At this point you can adjust the audio settings of the *Caruso* Blu disc mechanism.

Overview
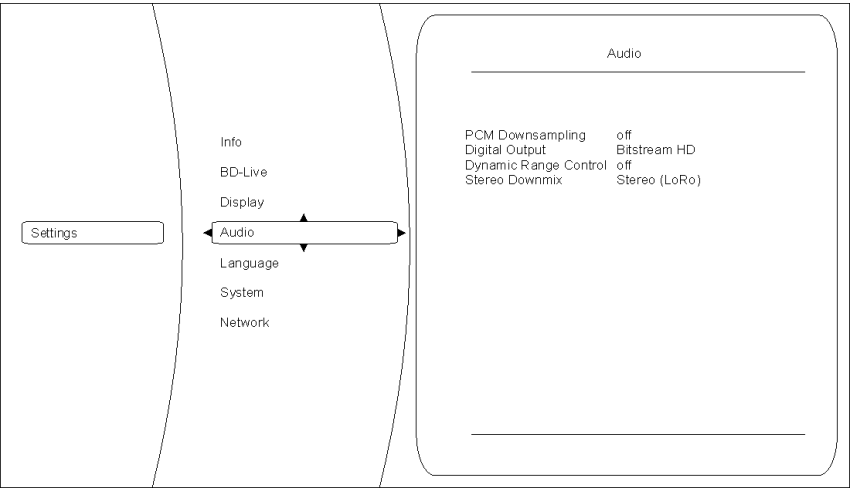
PCM Downsampling

(the settings you select here only affect the HDMI output)

In many cases it may be necessary to limit the sampling frequency (also known as the sampling rate) of the PCM output signal, e.g. if the sampling frequency of a Blu-ray disc is 192 kHz, but the TV set connected to the system can only process 96 kHz. Available settings are: OFF, 96 kHz and 48 kHz

Digital Output

(the settings you select here only affect the HDMI output)

Bitstream HD

For best possible audio quality you should select Bitstream HD. This setting supports the reproduction of all stereo and surround formats. However, this setting does not permit the playback of Secondary Audio soundtracks.

PCM Stereo

If you select one of these menu points, the primary and secondary audio channels are mixed, and a signal encoded as stereo PCM.

Bitstream Legacy

This setting only permits the reproduction of Dolby Digital, Dolby Digital Plus and DTS. The Secondary Audio function is not supported in this configuration.

Dynamic Range Control

Setting for dynamic limiting when playing Dolby Digital encoded discs.
If you prefer sound reproduction with reduced dynamic range, you can select dynamic limiting at this point. The sound is reproduced with full dynamic range at the OFF setting, whereas dynamic range is greatly reduced at the ON setting. If set to AUTO, the machine switches automatically between the two modes of operation in accordance with information on the disc.

Stereo Downmix

For playing back surround-encoded material please select the 'Lt Rt (surround encoded)' setting; for playing stereo material please choose the 'Lo Ro' setting.
If you select the 'AUTO' setting, the machine switches between the settings described above in accordance with the material being played.

Language category

At this point you can select the language settings for the *Caruso* Blu .

Overview
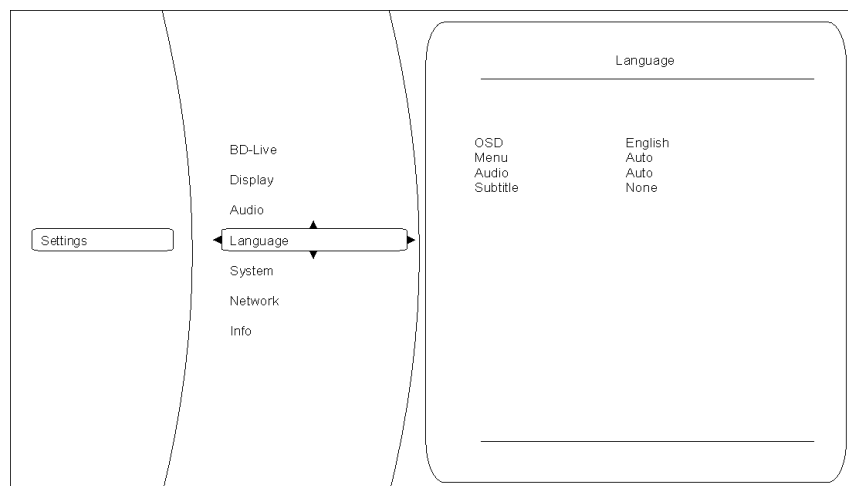
OSD

Here you can change the language used for the on-screen menus.
Please set your preferred language.

Menu

This setting defines the language in which the Blu-ray or DVD main menu is displayed. If you select the **'**AUTO**'** setting, the default language for the particular Blu-ray / DVD disc is used.

ⓘ Please note that not all languages are present on every disc.

Audio

Setting for the film soundtrack. If you select the **'**AUTO**'** setting, the default language for the particular Blu-ray / DVD disc is used.

ⓘ Please note that not all languages are present on every disc.

ⓘ Some discs do not allow the language to be selected using the Setup menu of the *Caruso* Blu . In this case the language can only be changed using the main menu present on the disc itself.

Sub-titles

Setting for the language used for sub-titles.
If you set 'OFF', no sub-titles are shown.

ⓘ Please note that not all languages are present on every disc.

ⓘ Some discs do not allow the language to be selected using the Setup menu of the *Caruso* Blu . In this case the language can only be changed using the main menu present on the disc itself.

Leaving the category

When you have entered all the correct settings in the category, you can leave it by pressing the ◀ button.

System category

This category contains various system settings of the *Caruso* Blu such as options for network access, USB, Play mode, ...:

Overview
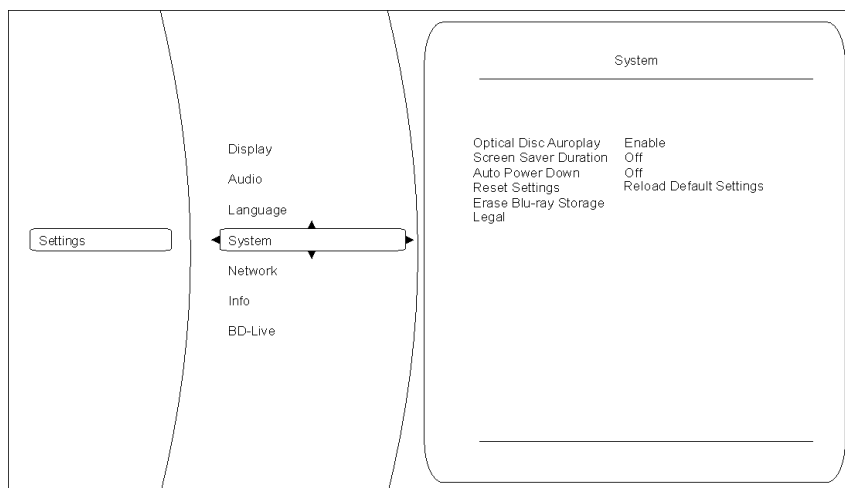
Optical discs

At this point you can determine whether playback starts automatically when a medium is inserted, i.e. without the need to press the Play button.

Activate: when you insert a disc, playback starts automatically without the need to press (I▶) / (OK).

Disable: when you insert a disc, playback only starts after you press (I▶) / (OK).

ⓘ The 'Activate' setting does not mean that the film starts immediately; the copy-right warning and any previews present on the disc are not skipped!

Screen-saver

The *Caruso* Blu features a screen-saver designed to prevent static images causing damage ("screen-burn") to the display device connected to the system.
The screen-saver is activated after a user-selectable time when playing music, or if the main menu of a DVD / Blu-ray disc is displayed constantly; it simply switches the screen dark.
Please use this option to define the time after which the screen-saver is triggered.
Possible settings are:
- 5 minutes
- 10 minutes
- 20 minutes
- 30 minutes
- off

Automatic power-down

Please use this option to define the time after which the *Caruso* Blu disc mechanism switches itself off.
Possible settings are:
- 30 minutes
- 45 minutes
- 60 minutes
- off

Erase Blu-ray storage

This option is used to erase the external storage medium.

Reset settings

If you activate this function, the player is reset to the factory default settings, i.e. all the settings you have entered are lost. To leave the menu item after a reset, press the ↰ button.

Leaving the category

When you have entered all the correct settings in this category, you can leave it by pressing the (◀) button.

BD-Live category

Overview
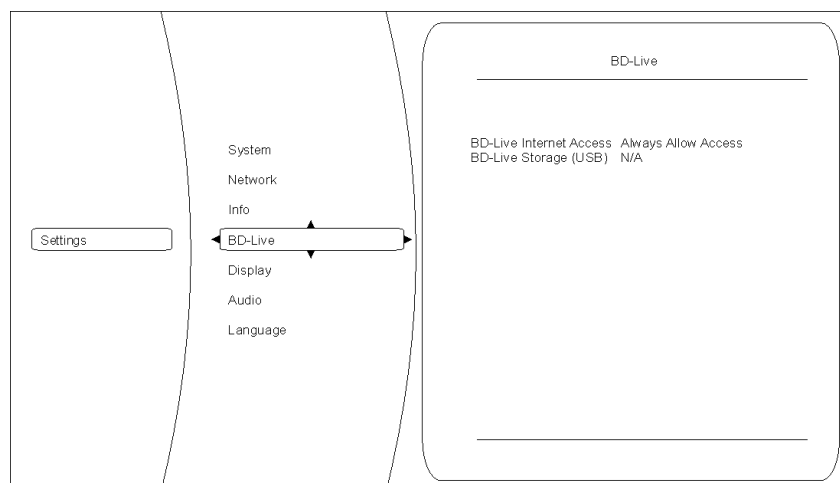
BD-Live Internet access

The *Caruso* Blu is capable of accessing content (trailers, previews, supplementary information ...) from the Internet. At this menu point you can define the conditions under which the player is allowed access.
Possible settings are:

Always allow access:
This setting allows the Blu-ray disc in the **K2 Blu** to access all requested con-tent.

Limit access:
This setting allows the Blu-ray disc in the **K2 Blu** to access only those Inter-net sites which have a valid on-line certificate.

Prohibit access:
This setting forbids the Blu-ray disc in the **K2 Blu** to access any Internet sites

BD-Live storage (USB)

(Erase BD-Live storage)

The *Caruso* Blu can store Internet content requested by the Blu-ray disc; to use this facility an external storage medium is required in the form of a USB memory stick.

These two options are used to manage and erase the external storage medium.

Leaving the category

When you have entered all the correct settings in this category, you can leave it by pressing the ◀ button.

Network category (wired network connection)

To be able to display BD-Live content, the *Caruso* Blu must have Internet access. Please connect the Blu-ray LAN socket on the back of the machine to your network.

Overview

Network

Interface	Wired
Link Status	Acquiring IP Address
MAC Address	00:16:FB:01:13:16
IP Mode	Dynamic
IP Address	192.6.2.165
Subnetz Mask	255.255.255.0
Gateway	192.6.2.3
Primary DNS	192.6.2.3
Secondary DNS	0.0.0.0

Settings — Audio, Language, System, Network, Info, BD-Live, Display
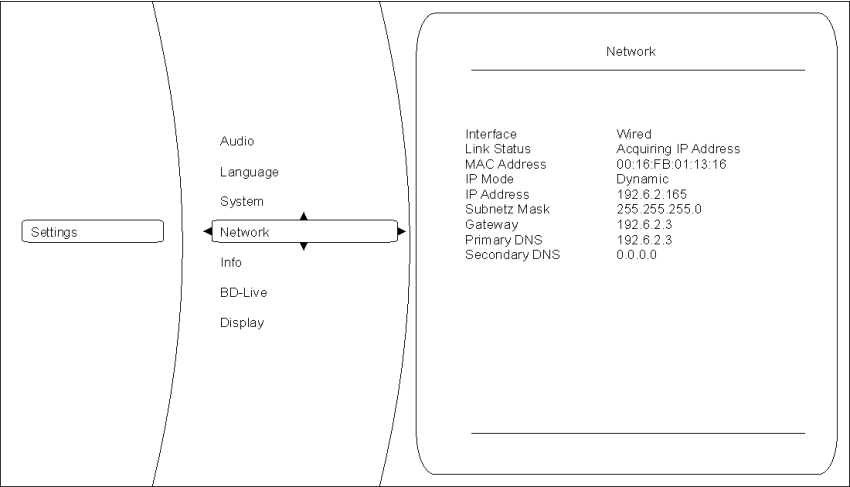
Interface, connection status and MAC address

The first three entries in the network menu are Status messages, i.e. they are for information purposes only, and cannot be altered. Their function is as follows:

Interface:
(In this case always Cable) indicates that the *Caruso* Blu is connected to the Internet by a wired connection.

Connection status:
Indicates whether the *Caruso* Blu can currently access the Internet (Link up). If 'Link down' is displayed at this point, please check the connection to your network, and / or your network settings.

MAC address:
This is a method of identifying your machine, and is required for Internet communication.

**IP mode,
IP address
Sub-net mask,
Gateway,
Primary DNS
Secondary DNS**

At this point please state whether the *Caruso* Blu is to obtain the data required for Internet communication (IP address, sub-net mask, Gateway, DNS) automatically, or whether you wish to configure these data manually.

Dynamic:
The *Caruso* Blu obtains its IP address, sub-net mask, Gateway and DNS address automatically. For this setting a DHCP-capable device must be present in your network.

Manual:
In this case you have to enter the IP address, sub-net mask, Gateway and DNS address manually. Selecting this setting activates the appropriate fields.

Network test

When you have completed the network configuration, you can check the network settings here.

ⓘ **Please contact your network administrator if network access is not set up correctly.**

Info category

In this menu you will find information about the current version of your machine.

The vTuner Premium Service

The list of radio stations displayed by your *Caruso* Blu is prepared by an Internet Service Provider, and transferred to your machine by data transfer. You can expand and edit the 'Favourite Groups' and 'Added Stations' list to suit your preferences via the Internet portal of your service provider, using the main menu point 'Internet Radio'. This is the procedure:

Open your Internet browser and call up the following web address:
http://ta.vtuner.com

The first time you register you should enter the MAC address of your *Caruso* Blu; the MAC address provides unique identification of your machine. The MAC address can be found in the Configuration menu (hold the ⬤SRC button pressed in), and consists of six pairs of characters, e.g.: 00:0e:9b:cc:a4:35. You do not need to enter the separating colons when you enter this data. MAC addresses are in hexadecimal format, i.e. the address consists only of the letters a to f, and the numbers 0 to 9.

Confirm your entry.
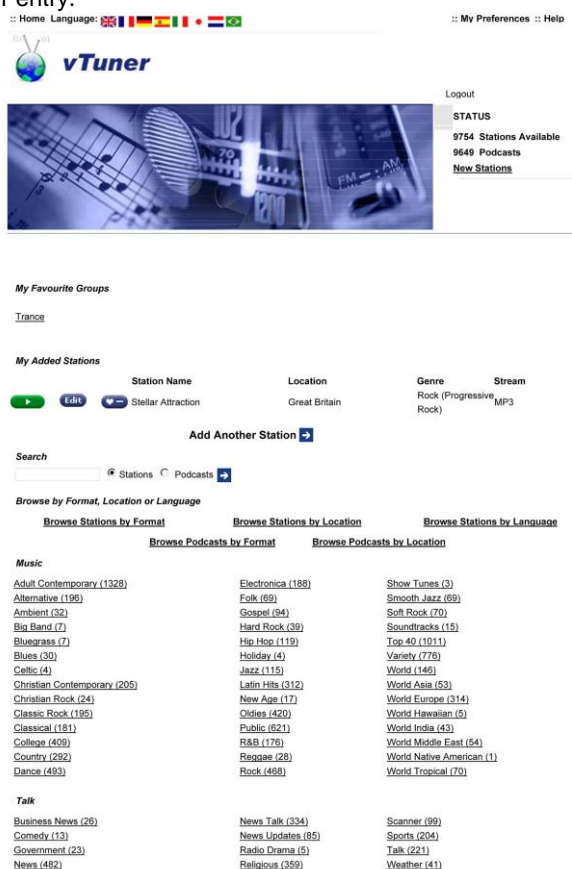
You must register with vTuner in order to be able to use the service; you can register via your e-Mail address and a password. Please follow the instructions stated by the service provider.

Now you can select radio stations from the comprehensive inventory provided by vTuner, and store them in lists. The lists are transferred to your *Caruso* Blu automatically via your Internet connection. Shortly after you have edited lists on the vTuner page, or stored new stations, you will find that they are available on your *Caruso* Blu.

ⓘ **Notes regarding Internet Radio:**

• Not all stations are always accessible
  - Not all stations transmit 24 hours
  - Stations are no longer accessible
  - Capacity exhausted

• Transmission breaks off
  - (Internet) network problems
  - Server capacity exhausted

Setting up new Internet Radio Stations	On the vTuner Internet site you can also set up new stations which are not (yet) included in the Select lists. This is accomplished by registering with vTuner and logging on. Click on the point **'My Added Stations'**. An input mask appears in which you can enter the data for your station. After a brief period you will be able to access the newly set-up station via the menu system of your *Caruso* Blu . You will find the station under Internet Radio / Added Stations.
Finding a Station URL ⓘ	You require the URL (Internet address) of any radio station you wish to set up on the vTuner service. You will generally find the URL on the station's website. Another method of finding the URL is to search for it using an Internet searching service such as Shoutcast (www.shoutcast.com). Once you have found your station, click on the 'Tune In' switch: this will normally open your media player, and the station should play. In most cases you can set Media Player to display the 'Streaming Properties'. For example, using the popular Winamp Player, simply right-click on the entry for the currently playing station in the player's Playlist window. A menu now opens, and clicking on the point 'View File Info' opens an information box which displays the streaming properties including the URL.

NETWORK TERMINOLOGY

General information

The Switch ensures that the individual components within a network are connected correctly. This is only possible if it can identify each device within the network unambiguously; this is the reason why every component is assigned a form of "house number" (IP address). The IP address consists of four blocks of digits with numbers in the range 0 to 255, separated by dots (e.g. 192.168.1.1).

Each of the individual number blocks may contain values between 1 and 254 (the values 0 and 255 are reserved for certain special functions, and should therefore not be used). However, if the network is to operate reliably, the network owner should only select addresses designed for home network use - i.e.: the first two number blocks should always be 192.168.xxx.xxx; the third block can be selected without restriction within the above limits (but should be the same for all devices on the network), and the fourth block must distinguish each device uniquely (e.g.: *Caruso* Blu r 192.168.001.001, NAS: 192.186.001.002, PC: 192.168.001.003, ...).

If this local network is to include Internet music sources (Internet radio) as well as physical devices, then the **T+A** *Caruso* Blu must have access to the Internet. This facility is provided by a device such as a router with connection to the DSL network. This router is also a constituent part of the network, and is assigned its own IP address. The **T+A** *Caruso* Blu must also be informed of the address of the router (Gateway) to enable it to gain access to the outside world.

ⓘ Please ensure that the first three blocks of the Device IP, Gateway IP and DNS 1 share the same address space (e.g. 192.168.0.xxx). The fourth block assigns a unique address (house number) to the components in the local network. This number must not be present more than once in the local network.
The Device IP mask should always be assigned the address 255.255.255.0.

Client / Renderer

Network device which obtains data from the network, decodes it and converts it into, for example, analogue music signals which can then be reproduced via an amplifier and loudspeakers. Streaming Clients also contain functions for displaying media content, and for navigating on the Internet or servers.

DHCP

DHCP is an abbreviation of **D**ynamic **H**ost **C**onfiguration **P**rotocol. The primary purpose of DHCP is to enable Clients to obtain your network configuration automatically from a server or router.

DNS

The Domain Name System (DNS) is one of the most important services on the Internet. Its primary task is to convert "Internet addresses", such as www.taelektroakustik.de, into the associated IP address. In most home networks the router carries out the DNS function.
If you decide to configure your network manually (without DHCP), then simply enter the address of your router as the DNS address when configuring the network.

Ethernet-LAN

Wired network. Interference-free network technology, with the drawback of having to deploy a network cable.

Gateway

The computer or router in your network which is responsible for managing data traffic between your home network and the outside world (i.e. the Internet).

IP-adress

Network address. Each device in the network requires an IP address at which it can be accessed, and by which it is unambiguously identifiable. No individual network address may be present more than once. This is important if you are entering network addresses manually. If the addresses in your network are assigned by DHCP, you do not need to worry about IP addresses at all, as the DHCP server manages the addresses automatically without your intervention.

Compatible hardware and UPnP servers

The marketplace offers a vast number of routers, NAS devices and USB hard discs made by a very wide range of manufacturers. **T+A** equipment is generally compatible with other makes of machine which bear the UPnP label. A list of devices which **T+A** has checked for compatibility can be found on the Internet at:
http://www.taelektroakustik.de/fileadmin/software/e-serie/MP_HW_KOMP.pdf.

NAS (Network Attached Storage)	Network storage facility. This is generally a very large-capacity (> 200 GB) storage device to which other devices have access. If the NAS server includes a UPnP-AV server service, then the *Caruso* Blu has access to media files stored on the NAS, and can play them back.
Powerline-LAN	In a Power-Line LAN data is transferred via the existing mains power cabling. Devices known as "Power-Line modems" are required at the transmitting and receiving end. In most cases Power-Line offers relatively problem-free data transfer with adequate data rates for audio streaming. We recommend Power-Line modems with bit rates of 85 or 200 Mbit/s.
Proxy server	A Proxy or Proxy server is a computer in the network which is capable of carrying out data transfers faster and more efficiently, and can increase security through the use of access control mechanisms. Most home networks do not include a proxy server. In this case there is no need to enter a Proxy address when configuring the *Caruso* Blu network.
Router	Central network device which creates and manages the connections between the network devices. In most networks the router also assumes the function of Gateway to the outside world.

UPnP-AV	Network protocol that makes media files available on the home network.
	
	On PCs and NAS storage devices a UPnP-AV server software must be installed to enable the *Caruso* Blu to access media files stored on these devices.
	
	Examples for UPnP-AV server software compatible with the *Caruso* Blu :
	Windows:
	- **Twonky Media Server**
	    http://www.twonky.com
	- **Windows Media Player 11**
	    http://www.microsoft.com/windows/windowsmedia/de/default.aspx
	
	Mac OS:
	  EyeConnect
	    http://elgato.com/
	- **Twonky Media Server**
	    http://www.twonky.com
	
	Linux:
	- **Mediatomb**
	    http://mediatomb.cc/
	- **GmediaServer**
	http://www.gnu.org/software/gmediaserver/

UPnP Control Point	The software permits music, video and pictures on mobile devices, PCs, tablets etc., to be managed in convenient lists for playback on what is known as a renderer (playback device). In conjunction with a UPnP server, a UPnP Control Point can use the *Caruso* Blu as a convenient means of playing music. In this combination the gapless music playback of the *Caruso* Blu depends on the server and the Control Point.
Server	Network device which provides data and services for other devices in the network. For example, a UPnP-AV server typically stores audio / video data, and makes it available to other devices (the Streaming Clients). Many UPnP-AV servers also offer functions such as cataloguing, and easy identification of media content using criteria such as artiste, album name, genre, etc.
WLAN (also W-LAN, Wireless LAN)	Radio network. The network is connected by means of radio waves operating in the 2.4 GHz frequency band. Radio networks are easy to install as no cables have to be deployed, but they are often problematic and unreliable - especially when the transmission distances are substantial. Power-Line networks, which can also be installed without separate cabling, are a better choice in many situations. In every case the deployment of a network cable is the most reliable and problem-free technology for data transfer.

Notes on Energy Saving

The *Caruso* Blu fulfils the requirements of the latest directives designed to economise on the use of energy (EuP directive). The modern construction of its mains PSU and the highly efficient design of the **T+A** switch-mode output stage play an important role in this.

The internal micro-processor constantly ensures that sub-assemblies which are not required for the current task are switched off automatically.

In stand-by mode the current drain depends on the functions of the *Caruso* Blu which are still active. Please refer to the table below for more details.

	Functions available in stand-by mode	Screen brightness	Standby current drain
Standby Mode "Off"	The *Caruso* Blu Can be switched on using the **FM100** remote control or by pressing the (ON) button on the Front	Off	< 0,4 Watt
Standby Mode "Comfort"	Clock display, alarm timer, automatic auto power-on function is possible and automatic clock setting by RDS signal	Off	< 2 Watt
		On 1….4	2,5 – 6,5 Watt
Standby Mode "App"	In addition to the facilities of "Comfort" stand-by mode, the *Caruso* Blu can be switched on and off via the network using the **T+A Control App**.	Off On 1….4	< 5 Watt max. 8 Watt

ⓘ In accordance with EU regulations designed to limit standby consumption, the default factory setting for the *Caruso* Blu is the standby mode 'Off' enabled.

If you wish to use the additional functions of the Comfort standby you must switch the energy-saver off in the menu System Configuration / Standby mode.

Software update

Software update generally

Software updates keep your *Caruso* Blu up-to-date. They bring new optimisations like faster operation and new features which could be developed in the future.

ⓘ It may occur that after a software update some of your user defined settings like network parameters or favourite stations are lost and have to be restored after the update**.**

Automatic software update

If the *Caruso* Blu is connected to the internet it will periodically check if a new software version is available. In case a new version is found, your Music Receiver will inform you on its display at the time it is switched OFF.

If this happens you have three choices which can be selected by the ◀ and ▶ buttons. A press on the OK button will execute your selection.

"**Yes**"   The update will be downloaded from the internet and installed. The *Caruso* Blu will switch OFF automatically after the update is complete.

"**No**"   This software update is ignored and not installed. You will be asked again when the next software version is available.

"**Later**"   The update information will be automatically displayed again after a while giving you the possibility to carry out the update at a later time.

Important notes

ⓘ If an error message appears when an update is being loaded - perhaps due to a poor WLAN connection - and the update is interrupted, the *Caruso* Blu should be connected to a wired network (LAN), and the update restarted.

Depending on the point at which the error in the update process occurred, you may find that the *Caruso* Blu starts with the previous version of the software, or switches on immediately with the message that the update must be loaded again from a USB stick or the Internet.

In the first case the update can be started manually using the software update menu. You will find a detailed description under www..

In the second case the update can be repeated simply by pressing the OK button. It is possible to disconnect the device from the mains in order to connect it somewhere else using a LAN.

In both cases the update should be carried out using a wired network (LAN) in the interests of safety.

Updating the disc drive (Servo Firmware)

The servo software of the disc drive can be updated via a USB stick. The Caruso checks the software version of the drive regularly. Once a newer than the installed version is available, the following message appears on the display (only at the source 'disc'):

'Servo firmware update available'

If this message appears, the servo software should be updated. The update process is described in the **Service Note 111**. The instructions and the latest firmware are available on our homepage:

http://www.ta-hifi.com/caruso-blu-servo-software

Trouble shooting

Many problems have a simple cause and a correspondingly simple solution. The following section describes a few difficulties you may encounter, and the measures you need to take to cure them. If you find it impossible to solve a problem with the help of these notes please disconnect the unit from the mains and ask your authorised **T+A** specialist dealer for advice.

Machine does not switch on (the screen remains dark).	**Cause 1:** Mains lead not plugged in correctly. **Remedy:** Check connection, push connector in firmly..
	Cause 2: Mains fuse burned out. **Remedy:** Have the mains fuse replaced by an authorised specialist workshop. The rating of the replacement fuse must agree with the specification printed on the unit.
Device switches itself off. **It can be switched on again, but switches itself off again when volume is increased.**	**Cause:** The mains power supply's protective circuit has been triggered. **Remedy:** Disconnect the device from the mains, and allow it to cool down for about ten minutes. **It is not sufficient just to switch the unit on and off again!**
Device does not respond to any controls	**Cause:** Powerful interference or electro-static discharge has disrupted the device's processor. **Remedy:** Disconnect the unit from the mains for at least one minute.

Remote control

Machine responds correctly to manual operation of the buttons, but cannot be controlled by IR remote control.	**Cause 1:** Incorrectly inserted batteries or flat batteries in the remote control handset. **Remedy:** Re-install batteries correctly or fit new ones.
	Cause 2: The remote control transmitter has no direct line-of-sight with the unit. **Remedy:** Make sure that the remote control transmitter has direct line-of-sight contact with the receiver - note that glass doors can interrupt the connection. Maximum range between transmitter and receiver: approx. 8 metres. Be sure to position the receiver where it is not subjected to direct sunlight or very bright artificial light. Fluorescent tubes and energy-saving lamps are powerful sources of interference.

Bluetooth

The mobile device cannot make a connection with the *Caruso* Blu **.**	**Cause 1:** The mobile device does not support the A2DP Bluetooth audio transfer protocol. **Remedy:** Use a mobile device which supports the A2DP protocol.
	Cause 2: A mobile device is already connected to the *Caruso* Blu . **Remedy:** You must disconnect the existing connection before the new device can be registered.

Dropouts occur during playback.	**Cause 1:** The distance to the *Caruso* Blu is too great (>6 metres), or there are obstacles between the *Caruso* Blu and the mobile device which affect reception. **Remedy:** Reduce the distance to the *Caruso* Blu, and avoid obstacles - such as persons - between the devices.
	Cause 2: The radio connection is suffering interference from other radio networks (e.g. WLAN, baby intercom, etc.) which may already be in use. **Remedy:** If possible, switch to the USB input or the Streaming Client.

Streaming Client

The streaming client can not connect to a network. On the display the indication **'SCL Connecting...'** is displayed.	**Cause 1 (cable LAN):** Network cable not properly connected **Remedy:** Connect network cable, check connection to router
	Cause 2 (cable LAN): The router uses energy-saving functions, causing it to switch the LAN port on with a delay, with the result that the *Caruso* Blu makes no connection - or only a sporadic connection - during the power-on process. **Remedy:** In the menu for the SCL source (hold the SRC button pressed in) change the "Network IF mode" menu point to "**Lan only**". This ensures that only the wired network connection is used.
	Cause 3 (wireless LAN): WLAN antenna not connected or placed in a location with bad reception quality **Remedy:** Connect WLAN antenna properly and find a location with good reception quality. Set the transmission power output of your WLAN router to maximum. Try to establish a network connection first in a location close to the WLAN router. If this succeeded try to connect to WLAN from a more remote location. Experiment with antenna position and try to find a location with better reception quality.
	Cause 4 (wireless LAN): WLAN reception quality bad (low field strength). Possibly too much attenuated by walls/ceilings on the transmission path. **Remedy:** Optimize location of receiver and transmitter antennas. **Alternative:** If transmission problems persist a so called ,Power Line' network might be good alternative to establish a good and stable network connection. The best, safest and most secure network however will always be a cable LAN network.
	Cause 5 (wireless LAN): Although the router has been selected, and the WLAN password has been entered correctly, no connection to the network is created. **Remedy:** Some routers are set by default to two simultaneous WLAN protocols (WPA / WPA2). Set your WLAN router to just one type of protocol, e.g. WPA2.
	Cause 6: Network parameters not properly configured. **Remedy:** Configure the network parameters correctly (see chapter **'Network configuration'**).
	Cause 7 (operation without network connection): For proper operation the *Caruso* Blu needs at least one properly connected network device. This can be a LAN or WLAN network or a USB storage device. **Remedy:** If the *Caruso* Blu shall be operated without network (LAN / WLAN) please connect at least a USB stick.

The message 'Track not found' is displayed	**Cause:** The music file on the storage device or on the music server was deleted or the internet radio station is not available at the moment. **Remedy:** Choose another music title or radio station. If the station or title is not available any more it should be deleted from the Favourites List (if stored there).
The message 'Format Error' is displayed	**Cause:** The title is stored / the radio station is transmitting in a format that cannot be decoded by the *Caruso* Blu. **Remedy:** Choose another title or station.
The message 'network problems – restarting' is displayed	**Cause:** Network problems in your home network or on the internet occurred; the connection was interrupted. **Remedy:** When encountering a network problem or interruption the *Caruso* Blu will re-start the network communication. After re-start please choose a music title or internet radio station and start playback.
Transmission interruptions occur when listening to internet radio stations.	**Cause 1:** The capacity of the internet radio station's server is at its limit. **Remedy:** Choose a different station. **Cause 2:** Network problems occurred. **Remedy:** Check your network (see above).
Some internet radio stations cannot be received	**Cause:** The internet radio station has been switched off, it transmits only at certain hours of the day or it has changed its internet address. **Remedy:** Try to get information from the website of the station regarding transmission hours an internet address (URL). Try to establish a connection to the station at a later time.
Bad sound quality at certain internet radio stations	**Cause:** The station transmits with a low audio bandwidth (low bitrate). **Remedy:** Use stations transmitting at least at 128 kBit/s. This is the lowest recommended bitrate for adequate sound quality. For good sound quality we recommend high bitrates like 320 kBit/s
USB Storage device is not recognised or Interruptions and / or jerky reproduction of audio or film material	**Cause 1:** The storage device (especially USB hard discs without separate power supply) draws more electrical current from the USB interface than is permitted by the USB standard. **Remedy:** Only use USB storage devices that conform to the USB standard or use storage devices with own power supplies. **Cause 2:** The storage device is not formatted with an appropriate file system. **Remedy:** The *Caruso* Blu accepts storage devices with FAT16 or FAT32 file systems.

ⓘ **Note:**

For big music archives we recommend to use a NAS (network attached storage) device with an UPnP-AV server to which the *Caruso* Blu will connect via your home network.

Picture:

No picture from the Blu-ray player.	**Cause 1:** HDMI lead not connected, or defective. **Remedy:** Connect the HDMI lead properly; have the lead checked by an expert.
	Cause 2: Video monitor not set to the correct picture input, or an incorrect video norm selected for the input. **Remedy:** Select the picture input (AV input) on the video monitor to which your *Caruso* Blu is connected.
	Cause 3: One of the disc mechanism's picture settings (e.g. Resolution in the 'Display' menu) is set to 'Auto'. Many TV sets prefer a fixed setting. **Remedy:** If possible, select fixed settings in the 'Display' menu. You may need to read the operating instructions supplied with your television in order to establish the correct values.

UKW und DAB Empfänger:

Just a few stations or none at all can be picked up.	**Cause:** The antenna system or antenna cable is faulty. **Remedy:** Check the antenna lead for good contact at the antenna socket (at the wall) and in the back of the receiver. Check that the antenna cable is not damaged, and has no sharp bends (kinks). If necessary, fit a new cable. As a test, try using the system with the trailing antenna supplied with the receiver. If you can now receive stations reasonably well, we recommend that you call out an expert antenna technician to check your antenna system.
The RDS station name does not appear in the display.	**Cause 1:** The station is not broadcasting RDS information. **Cause 2:** The tuner is not tuned accurately to the station. **Remedy:** Select only those stations which can be received with a strong signal: hiss-free and without interference.
DAB reception cuts out every thirty to sixty seconds, even though field strength (received signal strength) is high.	**Cause 1:** The received signal is suffering interference, e.g. by a radio alarm network. **Remedy 1:** Re-orientate the aerial to reduce the effect of the interference. **Remedy 2:** Installing a bandpass filter in the aerial system can help to eliminate such interference.

Disc:

The message *'Servo firmware update available'* **is displayed**	**Cause:** The device has detected a newer software version for the disc drive. **Remedy:** Install the newest disc drive firmware. For further information please see chapter **'Softwareupdate / Updating the disc drive'** on page 66.

Use with active loudspeakers

The *Caruso Blu* features pre-amplifier outputs on the back panel (PRE OUT) for use with active loudspeakers.

The *Caruso Blu* can be expanded to form a fully-featured 3.1 system by connecting a pair of active speakers and an active sub-woofer.

In a 3.1 system the *Caruso Blu* acts as Centre speaker, and should therefore be set up close to the television.

The *Caruso Blu* can also be operated exclusively with external active loudspeakers. In this case the integral speakers are unused.

The desired mode of operation can be set in the System Configuration menu. See the chapter **'System settings (System Configuration menu) / Loudspeakers'** on page 43.

Automatic power-on for T+A active loudspeakers

If compatible **T+A** active speakers (see list below) are connected to the unit, they can be switched on and off by means of a switching voltage (trigger signal) via the Cinch cable. This eliminates the need for any additional control lead. See the chapter **'System settings (System Configuration menu) / Loudspeakers / T+A active speaker auto-on'** on page 43.

ⓘ If you connect different (active) loudspeakers or power amplifiers to the unit, the trigger voltage should be set to **'Off'**.

T+A active speaker with trigger function

T+A CM Active
T+A CM Active Mini
T+A KS Active

Automatic power on function for active speakers from other manufacturers

A trigger voltage (switching voltage) is available at the **T+A E LINK** socket (**see Fig. 1**) on the back panel of the *Caruso Blu*. Active loudspeakers with a suitable interface can be switched on and off under the control of this voltage.

This feature enables immediate music playback, without any delay, and prevents the speakers being switched off when there are pauses in the music

ⓘ The Trigger output has a high impedance (**+5 V DC at 1 kOhm impedance**), and therefore cannot directly control large switching loads such as power relays.
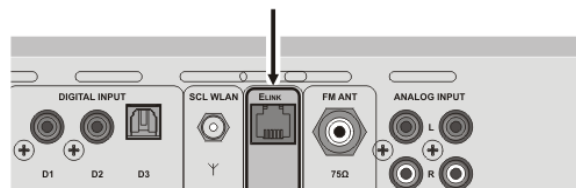
Fig. 1

Wiring of the T+A ELINK socket.

ELINK

1 Trigger ---> 5 VDC / 1kOhm
2 Reserviert / Reserved
3 Reserviert / Reserved
4 Reserviert / Reserved
5 GND ---> 0 VDC
6 Reserviert / Reserved

Fig. 2

Anhang / Appendix A

Anschluss-Schema / Wiring diagram
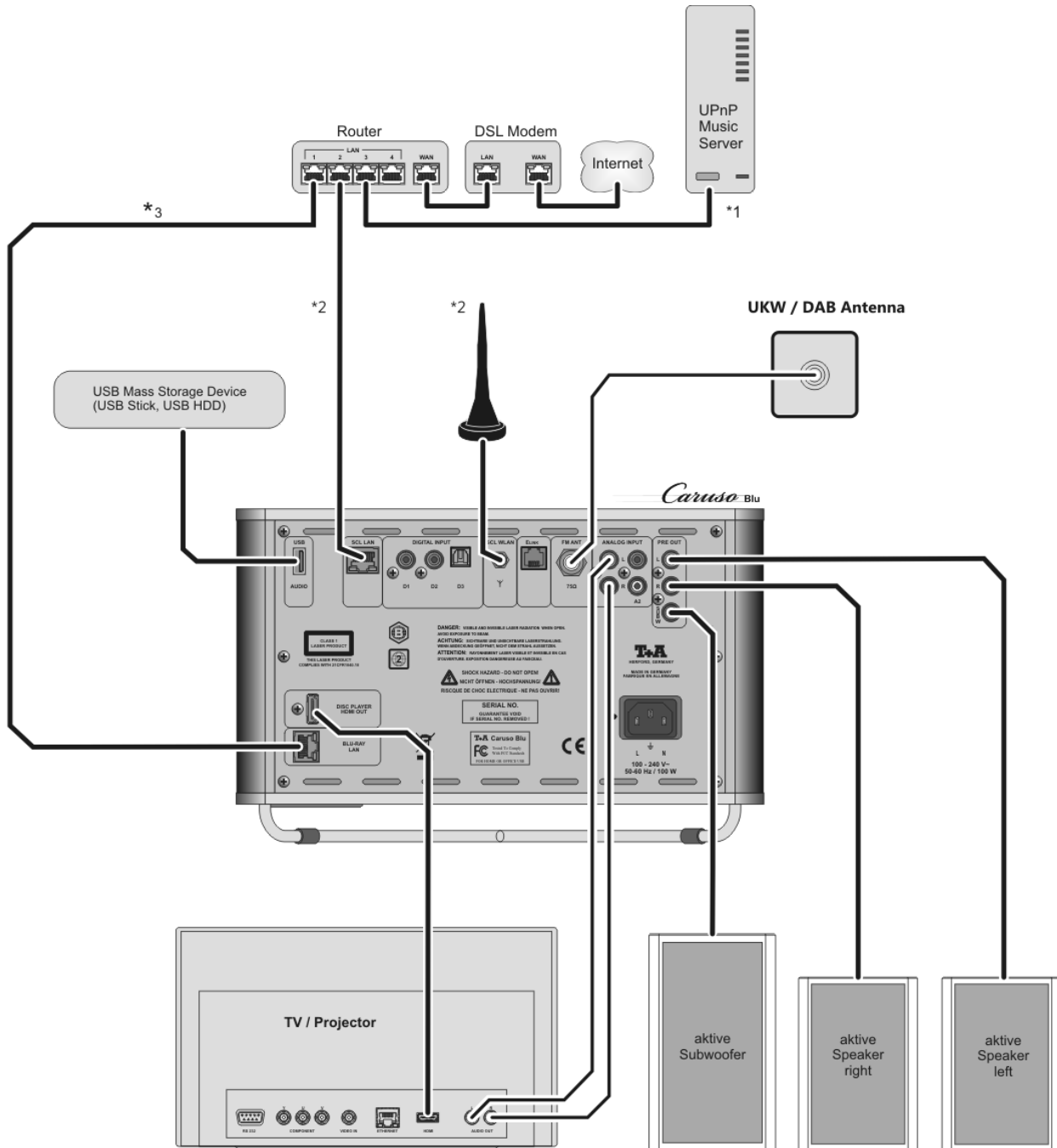
⚠️ **Attention!**
A properly set up home network with router must be installed and in operation to use the *Caruso Blu* .
For the use of internet radio a DSL access to the internet is needed.

For questions regarding setting up your network and internet connection please ask your system administrator or any network specialist.

*1 Music Server with UPnP-AV server software installed
*2 Connection either via Cable-LAN or Wireless-LAN
*3 Required for BluRay special functions, e.g. BD-Live

Anhang / Appendix B
Technische Daten / Specification

Verstärkerteil / Amplifier Section		
Eingänge / Inputs		
Analog / Analouge	2x Aux, 2V / 20kOhm	
Digital	SP/DIF (16-24bit): 2x coax (192kHz), 1x TOS-Link (96kHz)	
Ausgänge / Outputs	PRE Out Cinch, SUB Out Cinch	PRE Out RCA, SUB Out RCA
Kopfhörerausgang / Headphone output	für dynamische Kopfhörer > 30 Ω	for dynamic headphones > 30 Ω
Verstärker / Amplifier		
Bassbereich / Bass	1 x 50 W Dauerleistung	1 x 50 W continuous output
Mittel-Hochton / Mid-range/ treble	2 x 50 W Dauerleistung	2 x 50 W continuous output
Klirrfaktor / Total harmonic distortion	< 0,02 %	
Soundmangement	DSP gesteuerte Klangcharakteristiken	DSP controlled sound fields
Netzanschluss Mains power socket	100 – 240 V, 50 – 60 Hz	100 – 240 V, 50 – 60 Hz

Betriebsarten / Operating Modes		
Caruso Blu mit externen LS / with external LS	Stereo (2.0 + 2.1) 3-Kanal (3.0 + 3.1)	Stereo (2.0 + 2.1) 3-Channel (3.0 + 3.1)
Bassmanagement, Übergangsfrequenzen / Bass managenment / x-over frequencies	Vollbereich, Erweitert, 40, 60, 100, 150 Hz	Full range, Extended, 40, 60, 100, 150 Hz

FM Tuner		
Empfangsstandard / Reception standard	FM, FM-HD	
Frequenzbereich / Frequency response	87,5 – 108 MHz (Europa/US Version) 76 – 90 MHz (Japan)	87,5 – 108 MHz (Europe/US Version) 76 – 90 MHz (Japan)
Empfindlichkeit / Sensitivity		
Mono (26dB S/N)	0,9 dBµV	
Stereo (46dB S/N)	40 dBµV	
Übersteuerungsfestigkeit / Overload margin	> 103 dBµV	
Klirrfaktor / Total harmonic distortion	< 0,1 %	
Signal / Geräuschabstand (Mono / Stereo) / Signal: noise ratio, mono / stereo	72 / 62 dB	
Stereo-Kanaltrennung Stereo channel separation	46 dB	
Deemphasis (Europa / US Version De-emphasis (Europe / US Version	50 / 75 µS	
Datendienste / Data services	RDS / RDBS, Stationsname (PS), Programmtyp (PTY),Radiotext (RT), Uhrzeit	RDS / RDBS, station Name (PS), programme type (PTY), Radiotext (RT), time

DAB Tuner	
Empfangsstandard / Reception standard	DAB, DAB+
Frequenzbereich / Frequency response	168 - 240 MHz (Band III)
Empfindlichkeit (BER = 10^{-4}) Sensitivity (BER = 10^{-4})	
Übersteuerungsfestigkeit / Overload margin	> 103 dBµV

BluRay Player / Blu-ray - Player			
Laufwerk / Mechanism		3-Laser BluRay Linearlaufwerk auf vibrationsdämpfendem Subchassis	3-laser Blu-ray linear drive on vibration dampening subchassis
HDMI Audioausgabe / HDMI audio output		PCM Stereo, HD Bitstream out, Bitstream Legacy	PCM Stereo, HD Bitstream out, Bitstream Legacy
HDMI Videoausgang / HDMI video output		HDMI 1.3: PAL, NTSC, Bildformate 16:9, 4:3 Letterbox, Pan Scan	HDMI 1.3 PAL, NTSC Screen formats 16:9, 4:3 Letterbox, Pan Scan
Diskformate / Disc formats	Audio	CDDA (Audio CD), MP3 CD, CD-R, CD/RW, Hybrid SACD (CD Layer)	
	Video	BluRay Disc, DVD, VCD, SVCD	
	Photo	JPEG, Picture CD	
	Container und andere Formate / Container + other Formats	MKV, MPG, AVI, VOB, MP4, WMV (vom USB Speicher an der Front USB Buchse oder Disc abspielbar) Bedingt durch die große Anzahl an möglichen Video- und Audiostreams, die in Containerformaten wie MKV und MP4 integriert sein können, kann eine generelle Abspielbarkeit nicht gewährleistet werden.	MKV, MPG, AVI, VOB, MP4, WMV (Playable from an USB Stick connected to the front usb socket and Disc) Due to the large number of possible video and audio streams which may be integrated into container formats such as MKV and MP4, we cannot guarantee that all files will be playable.

Streaming Client		
Formate / Formats	AAC, AIFF, ALAC, FLAC, LPCM, MP3, OGG-Vorbis, WAV, WMA	
Medienserver / Media server	UPnP AV, Media Player 10 (WMDRM 10), DLNA-kompatible Server, vTuner Internet Radio Service	UPnP AV, Media Player 10 (WMDRM 10), DLNA-compatible Server, vTuner Internet Radio Service
Schnittstellen / Interfaces	USB 2.0, LAN, WLAN	USB 2.0, LAN, WLAN

Bluetooth		
	A2DP Bluetooth Audioübertragung Protokoll	A2DP Bluetooth audio transfer protocol
	*) SBC & AAC Codec mit optimierten Frequenzgang und Zeitverhalten	*) SBC & AAC Codec mit optimierten Frequenzgang und Zeitverhalten

Zubehör / Accessories	Systemfernbedienung FM100, W-LAN Antenne	FM100 system remote control handset, W-LAN aerial
Zusätzliche Funktionen / Features	Regelbare Displayhelligkeit, Drei-Zeiten-Wecktimer	Variable screen brightness, three-time alarm timer
Abmessungen H x B x T / Dimensions H x W x D	18 x 28 x 28 cm / 7 x 11 x 11 inch, 8 kg / 17,6 lbs	
Verarbeitung / Finishes	Schwarzes Korpus mit silbernen Deckeln	Black case with silver covers

Technisch begründete Änderungen vorbehalten. / We reserve the right to alter specifications.

T+A