T+A

USERMANUAL

Cala D

Welcome.

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

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 *Cala*.

T+A elektroakustik GmbH & Co KG

"iPod is a trademark of Apple Inc., registered in the U.S. and other countries."

CE All the components we use meet the European safety norms and standards which are currently valid. 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.

This product complies with the Low Voltage Directive (73/23/EEC), EMV Directives (89/336/EEC, 92/31/EEC) and CE Marking Directive (93/68/EEC).

Contents

About these instructions

All the controls and functions of the *Cala* 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 *Cala* to your home network.

## In der Anleitung verwendete Symbole

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.

Cala Audio System
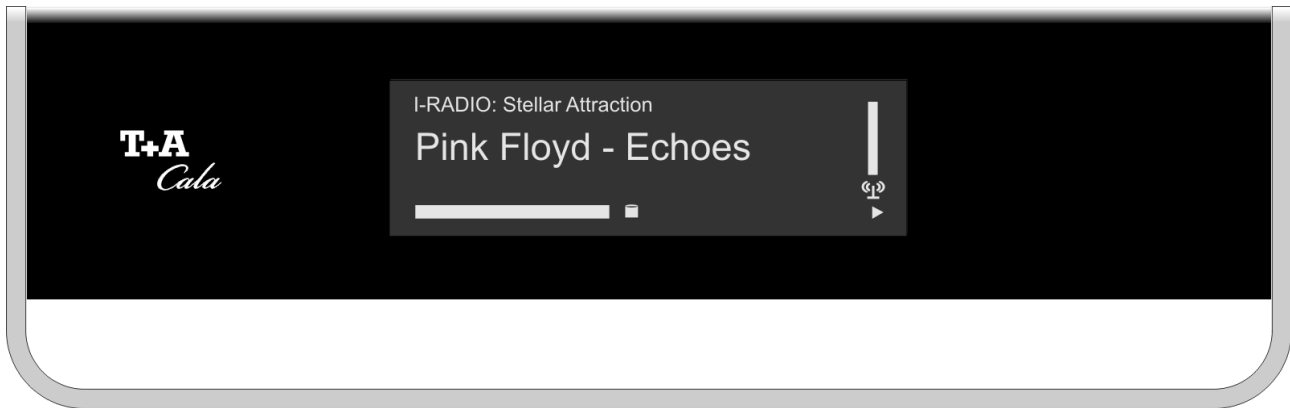
All the functions of the *Cala* are operated using the FM100 remote control handset. Direct-access buttons are provided for the essential functions such as source select and track select, whereas less frequently required functions are controlled by means of menus which are called up using the ⟨ SRC ⟩ / ⟨ SYS ⟩ button.

Screen

All information relating to machine status, the current music track and list navigation is displayed on the graphic screen of the *Cala*. The display is context-sensitive, and in part varies according to the capabilities and facilities of the service to which you are currently listening.

The most important information is highlighted on the screen according to context. Supplementary information is provided by symbols above and below the main data. The symbols used are listed and explained in the table below.
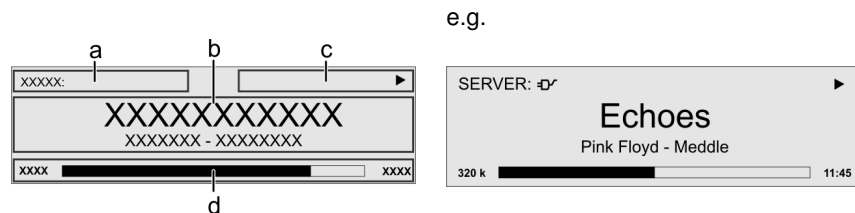
The displays and symbols which appear on the screen vary according to the currently active function (SCL, Disc, etc.) and the type of music currently being played.

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).

ⓘ The *Cala* provides different screen displays for the Streaming Client and the radio.

• **Large-format display:**
  Enlarged display of the most important information, clearly legible even from a distance

• **Detail display:**
  Small-text display showing a large number of additional information points, e.g. bit-rate etc.

A brief 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 *Cala* 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 *Cala* 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 *Cala* 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 oder **123** oder **abc**	Display of the symbol input modes
△ 8:30	Indicates that an alarm time is set and active

Remote Control

The infrared receiver for the remote control handset is located left of the screen area of the *Cala*. 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.

⏻ (red)	Switches the machine on and off
	Direct source select buttons. If the machine is switched off, pressing one of these buttons turns it on and at the same time selects the corresponding source device.
SCL	Selects the Streaming Client function of the *Cala* (Internet Radio, access to music servers).
A1 / AUD — D1	Selects the analogue A1 IN or the digital D1 IN input. Press the button repeatedly until the desired input is displayed on the screen.
A2 / VID — D2	Selects the analogue A2 IN or the digital D2 IN / D3 IN input. Press the button repeatedly until the desired input is displayed on the screen.
TUN — RADIO	Selects the Radio function of the *Cala*
REC	Selects the Bluetooth Receiver function
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 lowercase letters.
🔇 (yellow)	Switches sound on and off (MUTING)
- ◢ + (yellow)	Reduces / increases volume (volume control rocker)
♪	Brief press opens the tone control settings menu: Balance / Treble / Bass / Subwoofer / Loudness / Sound field. The menu points are called up using the ▲ / ▼ button, and can be altered using the ◄ / ► buttons. For more information on the tone controls please see the Chapter **'Tone settings'**.

ⓘ *Cala* can be controlled by the **T+A** App 'TA Control' too.

For further information please visit our homepage
www.ta-hifi.com/app

	Radio	**Streaming Client**

	Navigation buttons	
◀	Return to previous point	Return to previous point During alpha-numeric character input the ◀ button can be pressed to erase a character.
▶	Confirms the input	• Opens a folder • Starts a piece of music • Selects an Internet station
▲	Selects the previous point within a list	Selects the previous point within a list
▼	Selects the next point within a list	Selects the next point within a list
OK	Confirmation button when entering data • Opens a folder • Starts a piece of music	

	Playback functions	
◄◄	Selects the previous station in the favourite list.	Selects the previous track in the playlist
◄◄ ►►	Brief press: Manual tuning Long press: Search	Rewind / fast forward to search for a particular passage
►►I	Selects the next station in the favourite list.	Selects the next piece in the playlist
↺ (REPEAT)		Repeat function (see Chapter '*Operating the Streaming Client*')
■ (STOP)		Ends playback
I► (PLAY/ PAUSE)	Select station from Favourites list	• Starts playback of titles / or complete folders (**Play** function) • During playback: Halts playback (**pause**) or resumes playback

	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

	Special functions	
☹ (red)	Long press: Removes a favourite from the station list	Long press: Removes a favourite from the Favourites list created on the *Cala*
☺ (green)	Hinzufügen eines Favoriten zu der Senderliste	Hinzufügen eines Favoriten zu der an der *Cala* erstellten Favoritenliste
I/II (yellow)	Button for toggling between **Stereo** and **Mono reception** The **Stereo** setting is indicated constantly by a ⬀ symbol in the screen window. The **Mono** setting is indicated constantly by a ● symbol in the screen window.	
▲▼ (blue)		During character input: When pressed (repeatedly): toggles between numeric and alpha-numeric input, and between capitals and lower case script. In lists: Search function (Alpha Search)
☰	Displays the Favourites list	Displays the Favourites list
⊡	Memory button for quick station select	Memory button for quick station select
①	Brief press: Switches between different screen displays	Long press: Toggles between display of current music track and list navigation Brief press: Switches between different screen displays
◉	Switches the radio text function on and off	

Basic Functions of the *Cala*

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

Source switching

The source buttons are used to select the desired internal source (VHF radio, Streaming Client) or an external source (A1 IN, A2 IN, D1 IN, D2 IN, D3 IN, Bluetooth Receiver) for playback.

Once the *Cala* has switched to the internal sources they can be operated using the remote control.

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

Volume control

The volume of the *Cala* can be adjusted in fine increments using the **-** ⬤ **+** button. 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)

The *Cala* 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 the ⬤♪ button.

The features of the tone control menu are explained in detail in the next section.

	Adjustment range / Options:	**Explanations:**
Balance	-75 ... 0 ... +75	This menu point allows you to alter the balance between the left and right loud-speakers in order to compensate for an unfavourable listening position.
Treble Bass	-12 ... 0 ... +12	These two menu points are used to alter the treble and bass settings.
Tone Control	off / on	This menu point can be used to disable (by-pass) the *Cala*'s tone controls. To switch off the tone controls, select the "OFF" setting. When the tone controls are switched off, any adjustments you made to the following menu points "BASS" and "TREBLE" have no effect.
Loudness	off / on	The *Cala* features a volume-dependent tone control (**LOUDNESS**) which compensates for the frequency-dependent sensitivity of the human ear, and therefore of human hearing, at very low volume levels. This set-up option is used to switch loudness on or off.

Sub-woofer (This menu point only appears if an external sub-woofer is switched on in the System Configuration menu / 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.

Sound
(sound fields)

The following-setup options are intended for adjusting the reproduction of the *Cala* to suit the room acoustics.

Normal	Linear, musical tone setting with no enhancements; recommended for normally damped listening rooms.
Dynamic	Linear sound image with good dynamics and precision Particularly recommended for rooms with severe damping, and loudspeakers which tend to emphasise bass.
Warm	If you prefer a relaxed sound image with slightly subdued treble, select the sound field option Warm.
Speech	This option improves speech clarity in spoken word programmes, documentaries and sports transmissions.
Cinema	Setting for use with cinema films, offering good dialogue comprehensibility.

Mode of operation

Stereo /
Virtual Surround

The *Cala* offers two modes of operation: **STEREO** and **VIRTUAL SURROUND**. In contrast to Stereo mode in Virtual Surround mode it is possible to achieve surround effects even without the presence of physical rear loudspeakers.

The mode of operation can be changed by the (MODE) button. The first press on the (MODE) button displays the currently selected mode of operation on the front display. Further button-presses toggle between the modes of operation.

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

• To call up the menu press the ⬭ SYS ⬭ button briefly on the remote control handset.
• When the menu is opened, the screen displays the following Select points:

Adjustment facility			
Speaker	Configuration	To Loudspeaker menu	
Source Configuration	Configuration	To Source configuration menu	
Display brightness	1	...	7
Comfort standby	On	Off	
Language	English	Deutsch	further languages
System / Update	Settings	To Update / System menu	

• Use the ⬭▲⬭ / ⬭▼⬭ buttons to select a point in the menu.
• If you wish to change the selected menu point, first press the ⬭ OK ⬭ button, then use the ⬭◄⬭ / ⬭►⬭ buttons to alter the value.
• To accept the setting once you have changed the value, press the ⬭ OK ⬭ button again.
• If you wish to quit without accepting any alteration, press the ⬭■⬭ button at any time.
Press the ⬭ SYS ⬭ button again to leave the menu.

Menu point
Speaker
(Loudspeaker menu)

This menu point opens a sub-menu in which the settings for the loudspeakers can be altered.

Adjustment facility					
Speaker type	Linear	CS Mini	KS 350	...	
Speaker LF shape	Bass extd.	Full range	40 Hz	...	150 Hz
Speaker stand	Free	Near to wall	In a corner	On a shelf	
Subwoofer	Off	40 Hz	60 Hz	100 Hz	150 Hz

Sub-point
Speaker-type

The purpose of this menu point is to match the *Cala* accurately to the **T+A** loudspeakers connected to it. The calibration process ensures that you obtain the best possible sound. Select the appropriate setting to suit the loudspeakers connected to the machine. If you are using unlisted speakers, or speakers made by other manufacturers, select the 'linear' setting; in this case no matching is carried out.

Sub-point
Speaker
LF Shape

In this menu point you can set the loudspeaker type and, if appropriate, the cross-over frequency between the main loudspeakers (loudspeaker group A - left / right) and the sub-woofer.
If you are using large loudspeakers, please choose the "FULL RANGE" setting. For relatively small satellite speakers we suggest that you 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. The "Bass extd." setting is recommended for small loudspeakers such as small bookshelf units, if they are operated without a sub-woofer. At this setting the bass range of the speaker is extended to low frequencies.

Sub-point **SPK stand ...**	If loudspeakers are set up close to a wall or a corner, the result may be a disproportionate boost to the low frequencies. To compensate for this effect please select one of the set-up options free / near to wall / in a corner / shelf, according to the location of your loudspeakers.
Sub-point **Subwoofer**	In this menu point you can set the cross-over frequency for your sub-woofer. If your system does not include a sub-woofer, you should choose the "OFF" setting.
Menu point **Source configuration**	At this menu point you can change the settings for the external sources. The following settings can be made.
Changing the source name	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 *"TV"* to the A1 IN 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.
ⓘ	When you call up Source Select using (A1/AUD) / (A2/VID) on the remote control handset, 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 for sources A1 IN and A2 IN can be adjusted to suit the output level of the device connected to these sockets. The input level can be set to any of four values. Set the input in such a way that the volume matches that of the *Cala*'s internal sources, then confirm your choice with the OK button. This action saves the settings for that source.
Sub-point **Auto power-on**	At this menu point you can activate the automatic power-on function for one of the sources A1 IN, A2 IN, D1 IN, D2 IN or D3 IN. If the function is switched on the *Cala* switches itself on automatically from stand-by when a music signal is detected at the selected input. If the connected device is switched off the *Cala* switches itself off too after about twenty minutes. In this mode of operation the volume level for the selected source is controlled and stored separately, and is only changed when that source is selected. However, this only occurs if you have selected the source for which this function has been set. This mode of operation can be used for example to switch the *Cala* on and off in combination with a connected TV set.
ⓘ	This function is only possible if the 'Comfort stand-by' mode has been selected and is indicated on the screen in standby and operation mode.
Menu point **Display brightness**	Here you can adjust the brightness of the screen in normal use to suit your personal preference. The available settings are: 1 to 7

Menu point **Comfort standby** (Stand-by mode)	The *Cala* features two stand-by modes: ECO Standby with reduced stand-by current drain, and Comfort Standby with additional functions, but slightly higher current drain. You can select your preferred stand-by mode in this menu point: Off (ECO Standby): Active functions in ECO Standby mode: can only be switched on by remote control On (Comfort-Standby): The following expanded functions are available: Alarm-timer, clock display and the automatic power on function for one of the analogue- or digital-inputs (A1 IN, A2 IN, D1 IN, D2 IN or D3 IN).
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 *Cala*. ⓘ The language used for any transferred data, e.g. from an iPod or an Internet radio station, is determined by the device itself or the radio station, and therefore **cannot** be selected on the *Cala*.
Menu point **System / Update**	At this menu point you will find seldom needed functions such as software updates, regional setting for the tuner, activation of optional special functions, and reset of default settings.
Sub-point **Update**	At this menu point you can check the software version of the individual sub-assemblies / modules by pressing the ◀ / ▶ buttons. It is also possible to initiate the update process via USB or LAN (Internet). ⓘ For detailed information about updating the software please visit our **T+A** Homepage **www.ta-hifi.com** > Support > Hardware/Software.
Sub-point **Reset all for region**	At this menu point you can adjust the radio de-emphasis for your particular region.
Sub-point **Factory settings**	Here you can reset the machine to its original state, i.e. when it was delivered. All settings are reset, and stored favourites etc. are erased.
Sub-point **Code**	At this menu point activated functions such as gapless playback (GPL ok) are displayed. If you obtain a code to activate any optional special functions, it can be entered here.

Network Settings

The method of using this menu and its settings are described in detail in the Chapter Installation / Using the system for the first time, Network configuration.

Alarm Timer

The machine features an integral Timer module which is capable of switching the *Cala* on with a selectable source at a programmable time (alarm clock).
Selecting an alarm timer in the Alarm Timer menu switches the function on and activates it. You can now switch the *Cala* off. The *Cala* will switch itself on at the pre-set time for as long as the set time is displayed on the screen.

(i) This function is only possible if the 'Comfort stand-by' mode has been selected.

Alarm function
- with automatic power-off

If the Timer is active, the *Cala* switches itself on at the programmed alarm time. Once switched on, a bell symbol flashes on the screen.
The *Cala* switches itself off automatically one hour after the alarm time, unless the alarm function is disabled during this period.

The alarm function can be disabled by operating or switching off the device. If the alarm function is disabled, the time display and bell disappears. If the timer is disabled by operating the device it now does **not** switch itself off **automatically** after an hour! If you wish to switch the machine off, you must do so manually by pressing the (⏻) button.

Switching the Timer off

A long press on the (SYS) button calls up the Alarm Timer menu, where the timer can then be disabled.

(i) A brief press on the (SYS) button calls up the Alarm Timer menu even when the machine is switched off.

Alarm Timer menu

Calling up and operating the menu

• A long press on the (SYS) button 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 facility			
Alarm select	Alarm Time 1	Alarm Time 2	Alarm Off
Set Alarm Time	00.00		
Set Alarm Source	Radio BFBS R1	Tone	
Set Alarm Vol.	0		
Time Mode	RDS	Summer time	Winter time
Set Time	00.00		
Disp. Brightness (stdby)	1	...	3

• 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 (SYS) button again to leave the menu.

| Menu point **Alarm select** | In this menu point you can select whether the machine is to be switched on automatically, and using which alarm. |

| Menu point **Set Alarm Time** | Manual alarm time setting for the currently active alarm. Any change you make at this point takes place slowly at first; holding the button pressed in increases the rate of change. |

| 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 Radio, 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 well.

| 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 Disp. Brightness (Stdby)

At this point you can adjust the screen brightness in Stand-by 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.

Slumber-function

The machine has a slumber function that switches it to standby after a selectable time interval between 15 minutes and 12 hours. This selection can be done in steps of 15 minutes.

Activate slumber function

While the *Cala* is powered up keep the ⏻ key of the remote control 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 the ⏻ key pressed until the displaying of the slumber time is not shown any longer on the display. After switching the function off the device can be operated in the usual way. Alternatively the slumber function is also ended when the *Cala* is switched off.

ⓘ As long as the slumber function is active there is no other user operation possible besides the slumber functions mentioned above and the changing of the volume.

Operating the source devices in detail

Operating the Radio

RADIO

First select the radio as source by pressing the **RADIO** button.

**Device display in
Radio mode**

```
  a     b            c       d              f

  Radio: Pop                        93.20 MHz  CO
                    WDR 2
               XXXXXXXXXXXXXX

  ██████████████████████████████
                    e
```
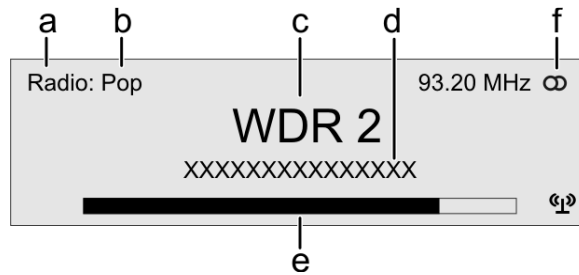
a) When you are listening to a radio station in radio mode, the message **'Radio'** appears in the top line of the screen.

b) Here 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 'f'.

d) These lines display information which is broadcast by the station (e.g. Radiotext).

e) The *field strength* and therefore the reception quality to be expected from the set transmitting station can be assessed from the field strength.

f) Display of Stereo **'CO'** / Mono**'●'**

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)

Manual adjustments

Station Search

Holding one of the ◄◄ / ►► buttons pressed in initiates a station search in the upward or downward direction. The station search stops automatically at the next station.

Mono / Stereo

You can toggle the radio of the *Cala* 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 **'CO'** (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.

Favourites List and *Presets*

In addition to manual tuning and searching, the radio of the *Cala* 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.

You can edit the Favourites list to suit your preferences (see section **'Adding stations to the Favourites list / Erasing stations from the Favourites list'**).

It is also possible to store the 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.

Favourites List

The Favourites list allows the user to store preferred radio stations, i.e. those frequently selected.

Creating the Favourites list

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                      Frequency
Scan for stations                           Start
```
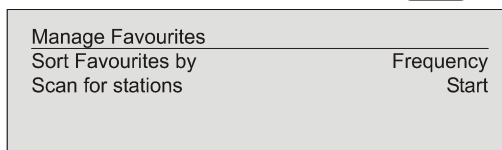
Select the menu point **'Scan for stations'** and initiate the station search with the (OK) button. The screen displays the message **'Auto Store active',** and the *Cala* now automatically stores up to sixty receivable stations in the Favourites list.

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.

Erasing stations from the Favourites list

Open the Favourites list. 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'**: (OK) button):

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

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.

Selecting radio stations from the Favourites list

• Call up the Favourites list with the (≣) button.

```
                          a

          WDR 2
          89,90 MHz
          92,20 MHz

          ←           (12/38)              ←
          b              c                 d
```
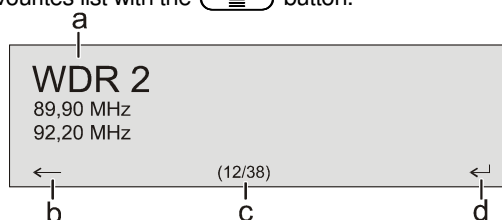
a) Use the (▲) / (▼) buttons to select a stored station from the Favourites list. The selected station is displayed in enlarged form.

b) Press the (◄) button to return to the station previously selected.

c) Position display in the Favourites list.

d) Press the (►) / (I►) / (►II) / (OK) button to select the station displayed in enlarged form.

• 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.

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 Streaming Client

General Information on the Streaming Client

The **T+A** *Cala* 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 *Cala*, 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 *Cala***'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
iPod	NAS server (with UPnP-AV server)
	PC (with UPnP-AV server)

The media content formats which the *Cala* 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 *Cala* can also play back high-resolution audio formats (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'**).

The music from the iPod is read out digitally, and converted into the analogue music signal by the high-quality internal **T+A** D/A converters. This technique produces the best possible quality of reproduction from an iPod.

ⓘ Digital audio output is supported by the following iPod models:

iPod nano (all models)   **iPod classic** (all models)
iPod touch (all models)   **iPhone** (all models)
iPod 5G
Earlier models of iPod only generate analogue audio output, and are not supported.

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 *Cala* 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, the front panel screen displays a list of accessible media sources:

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

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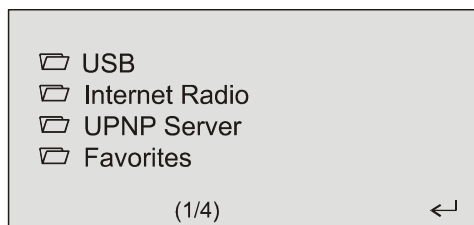
ⓘ *) To play back media files that are stored on PC's or NAS storage devices on your home network, a UPnP-AV server software must be installed on these devices to make the media content accessible through the network.

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 *Cala* 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 four 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. After pressing the (OK) button or after a brief delay with no further input the *Cala* 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 from 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 VHF 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 ten Presets under the numbers (0) to (9).

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 *Cala* 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 *Cala* main menu under the Internet Radio / Added Stations point.

Operating the Bluetooth Receiver

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

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

Selecting the Bluetooth Audio source

Select the 'Bluetooth' source by repeatedly pressing the (A1/PH) button on the remote control handset, or the (:●) button on the *Cala*'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 *Cala*, the external device must first be registered to the *Cala*. As long as the *Cala* 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 *Cala*, make the connection to your mobile device.

Once the connection is successfully established, the message on the *Cala*'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.
Some Bluetooth devices which support the AVRCP protocol can be controlled by *Cala*'s FM100 remote control handset.
The behaviour and method of operating the connected mobile device are determined by the device itself. In general terms the function of the buttons 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.

ⓘ Please note that many AVRCP-capable mobile devices do not support the controlling through the *Cala*. In case of doubt, please ask the manufacturer of your mobile device.

Controlling the *Cala*

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

ⓘ Please note that many AVRCP-capable mobile devices do not support all the *Cala*'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 *Cala* 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 *Cala* or the FM 100.

NOTES

ⓘ The *Cala* 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 *Cala* 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 *Cala* 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 *Cala* instead of Bluetooth.

Installation
Using the system for the first time
Safety notes

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
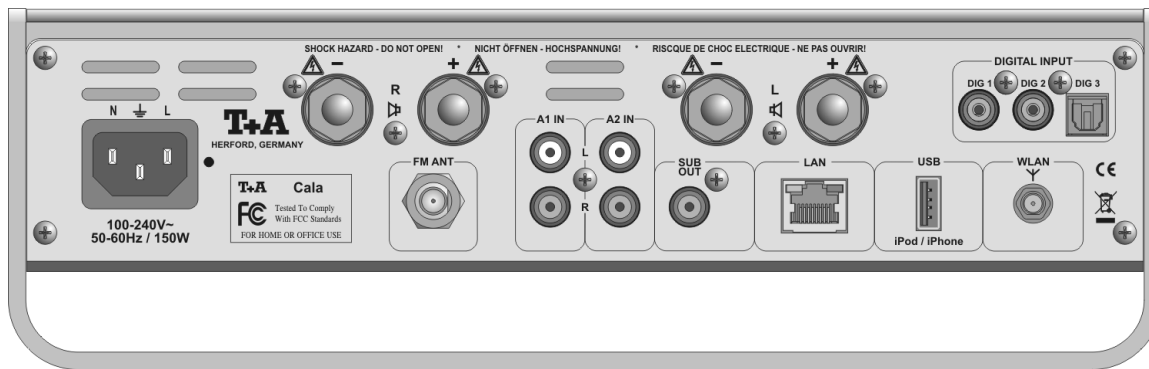
Mains input	The mains lead is plugged into this socket. For information on correct mains connections please refer to the notes in the Chapters '***Using the system for the first time***', '***Wiring***' and '***Safety Notes***'.
FM ANT **(Aerial input)**	The *Cala* features a 75 Ω aerial input marked **FM ANT** which is suitable for a cable connection as well as a standard domestic radio aerial. For first-class reception quality a high-performance aerial system, competently installed, is a fundamental necessity.
A1 IN	Universal analogue stereo sound input ⓘ This input is equipped with an automatic power on function. Please refer chapter 'System settings / source settings'.
A2 IN	Universal analogue stereo sound input ⓘ This input is equipped with an automatic power on function. Please refer chapter 'System settings / source settings'.
SUB OUT	Output socket for an active sub-woofer. The use of a sub-woofer is optional. ⓘ If a sub-woofer is connected, it must be switched on in the Loudspeaker menu (see Chapter **'System Settings, Loudspeaker'**).
LAN	Router socket ⓘ If LAN is connected, the LAN connection has priority, and WLAN is automatically disabled.
WLAN	Aerial socket for receiving WLAN The aerial can be unscrewed from the aerial base, and screwed directly into the socket. ⓘ **Automatic activation of the WLAN module** Every time you switch the *Cala* on, it first 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 *Cala* activates its WLAN module, and attempts to make a connection to a wireless network. ⚠ **Caution!** If you use WLAN, the LAN socket must be left vacant.

USB	Socket for USB memory sticks, external hard discs or iPod.
	The storage device must be formatted with a FAT16 or FAT32 file system.
	The USB device (example 2,5 inch HDD) can be supplied with power from the *Cala* via the USB socket: The maximum supply current provided by the USB socket is 1000 mA.
	If the power consumption of the connected USB device is higher than 1000 mA it must be powered by an extra power supply.

DIGITAL INPUT	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.
(i)	This input is equipped with an automatic power on function. Please refer chapter 'System settings / source settings'.

◁ R and ◁ L **(loudspeaker terminals)**	One pair of loudspeakers can be connected to the *Cala* (SPEAKER ◁ **R** and SPEAKER ◁ **L**). The impedance of each speaker must not be lower than 4 Ω (DIN rating).
⚠	**Caution!** Make sure that the terminals are firmly screwed down, and that no short-circuits are possible as a result of projecting cable ends or errant wire strands.
(i)	**Note:** If the loudspeakers are to be used in countries outside the EU the red/black stoppers can be removed from the loudspeaker terminals. The speakers can then be connected using banana plugs.
	The stoppers are simply a push-fit in the terminals, and can be prised out from the rear using a suitable tool such as a knife blade

Installation and wiring

Carefully unpack the *Cala* and store the original packing materials 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.

Please be sure to read the safety notes in these instructions.

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.

Before placing the unit on a sensitive surface, please check the compatibility of the lacquer and the unit's feet at a non-visible point.

The unit should be placed on a rigid, level base.

The quality and characteristics of the base on which your high-quality Hi-Fi equipment stands define the limits of sound quality which can be achieved. The base surface should be as heavy, rigid, hard and level as possible. Make sure there are no loose objects on the support surface which could cause rattling noises or resonance effects.

The receiver should be set up in a dry, well-ventilated 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 inflammable.

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 at least 10 cm free space above 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.

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.

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

Notes on connections:

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

- When you connect the input sockets of the amplifier to the output sockets on the source devices 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.

- 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 LINE'** 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 *Cala* 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 FOUR'** mains cable, ready-to-use **'POWER LINE'** mains cable with integrated shell-type filters 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	The battery compartment can be opened by pressing in the locking surface and sliding the cover down and off. Remove the old cells and fit three new dry cells of the **LR 03 (MICRO)** type in the battery compartment, taking care to fit them with correct polarity. Please remember that **all the cells must be replaced** 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	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.

⚠ **Caution**
Always disconnect the unit from the mains supply before cleaning it.

Notes on Energy Saving

General information	The *Cala* satisfies the requirements of the latest directives concerning energy-saving measures (EuP directive). The modern design of the mains power supply makes an important contribution to this.

The internal micro-processor constantly ensures that sub-assemblies which are not currently required are automatically switched off. The micro-processor itself operates in stand-by mode at a relatively low clock speed, and only responds to the remote control receiver.
In stand-by mode the current drain of the *Cala* is less than 0.5 Watt.
If you intend not to use the amplifier for a long period, it should be disconnected from the mains socket, i.e. the mains plug should be withdrawn from the wall socket.

Safety notes

All the components in this device fulfil the currently valid German and European safety norms and standards.

We ensure that our products are of consistently high quality, and meet all specifications, by checking all materials rigorously for quality, using meticulous production methods and subjecting each unit to a fully automatic computer-controlled final inspection.

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

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*'**.

Power supply

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 disconnects 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.

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 overvoltage's 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.

ⓘ Many insurance companies offer lightning damage insurance for electrical equipment as part of their household insurance service.

Approved usage

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.

T+A equipment which includes a radio or television receiving section must be operated within the stipulations laid down by the Post Office and the Telecommunications authorities in the country in which it is used.

This unit may only be used to receive or reproduce those transmissions which are intended for public reception. The reception or reproduction of other transmissions (e. g. police radio or mobile radio broadcasts) is prohibited.

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 with the EC directives *2006/95/EC, 2004/108/EC and 2009/125/EC* and the national laws based on those directives.

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
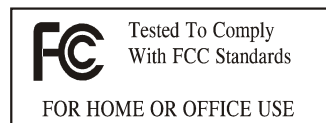
(for use in the United States of America only)

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.

Network Configuration

General Information

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

If you wish to use your *Cala* in your home network, you must first enter the necessary network settings on the *Cala*. 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.

ⓘ **High-resolution audio files via network**
The **Music Player** *balanced* can also play back high-resolution up to 192 kHz / 32-bit audio formats in the ALAC, FLAC and WAV formats. A WLAN connection is not generally sufficient to handle the large quantities of data. If you wish to play back high-resolution audio files via a network connection, please use a cable network exclusively.

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 *Cala* 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 *Cala* 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 *Cala* Streaming Client function by pressing the ⬡ᴀᴄ⬡ button.
Open the configuration menu with a long press on the ⬡ᴀʀᴄ⬡ 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 ⬡ᴏᴋ⬡ 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 ⬡ᴏᴋ⬡ 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 ⬡ᴏᴋ⬡ button. This action causes the *Cala* 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 ⬡ᴏᴋ⬡ 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 *Cala* to an operational network or Power-Line modem using the LAN socket on the back panel.
- Switch the *Cala* 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	Cala	(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.

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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 *Cala* 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 *Cala*
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 *Cala* 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 *Cala* WLAN aerial socket, and ensure that no cable is attached to the *Cala* LAN socket.
- Switch the *Cala* 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	Cala	(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).

(i) 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 *Cala* with the new settings.

Special case:
Manual Network Entry

The *Cala* automatically searches for accessible radio networks, and lists them when you call up the menu point 'WLAN Configuration'. However, the *Cala* 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 *Cala* 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'.

The vTuner Premium Service

The list of radio stations displayed by your *Cala* 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 *Cala*; 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 *Cala* 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 *Cala*.

ⓘ **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 *Cala*. 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.: *Cala*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** *Cala* 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** *Cala* 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 *Cala* 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 *Cala* 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 *Cala* to access media files stored on these devices.
	
	Examples for UPnP-AV server software compatible with the *Cala*:
	
	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 *Cala* as a convenient means of playing music. In this combination the gapless music playback of the *Cala* 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.

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	**Cause 1:** Mains lead not plugged in correctly. **Remedy:** Check connection, push connector in firmly.
Machine responds correctly to manual operation of the buttons, but can not 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 *Cala*. **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.
Flat sound image, insufficient bass response.	**Cause:** The loudspeaker cables are connected with reversed polarity. **Remedy:** Check the speaker connections at the loudspeakers and at the amplifier's speaker terminals; correct if necessary.
Loud humming noise from the loudspeakers.	**Cause:** Poor contact between the Cinch plugs and sockets, or a faulty Cinch cable. **Remedy:** Please check all connections and cables thoroughly.

Tuner

Whistling or whispering noises from the speakers.	**Cause:** The antenna lead is routed too close to a mains, remote control or audio signal cable. **Remedy:** Move the leads so that they are spaced well apart. Use the domestic (loft or outside) antenna or a cable connection.
The RDS station name does not appear in the display.	**Cause 1:** The station is not broadcasting **RDS** information.
	Cause 2: Reception is poor, interference is severe, or the *field strength* (signal strength) is low. **Remedy:** Select only those stations which can be received with a strong signal: hiss-free and without interference.
The unit can be operated normally, but very 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 tuner. As a test, try using the system with a trailing antenna. If you can now receive stations reasonably well, we recommend that you call out an expert antenna technician to check your antenna system.

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 (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 3 (wireless LAN): WLAN reception qualiy 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 4: Netzwork parameters not properly configured. **Remedy:** Configure the network parameters correctly (see chapter **'Network configuration'**).
	Cause 5 (operation without network connection): For proper operation the *Cala* needs at least one properly connected network device. This can be a LAN or WLAN network or a USB storage device. **Remedy:** If the *Cala* shall be operated without network (LAN / WLAN) please connect at least a USB stick.
The message **'Track not found'** **is displayd**	**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 an other 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 can not be decoded by the *Cala*. **Remedy:** Choose an other 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 *Cala* 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 it's limit. **Remedy:** Choose a different station.
	Cause 2: Network problems occurred. **Remedy:** Check your network (see above).
Some internet radio stations can not be received	**Cause:** The internet radio station has been switched off, it transmits only at certain hours of the day or it has changed ist internet address. **Remedy:** Try to get information from the website of the station regarding transmission hours ans internet address (URL). Try to establish a connection to the station at a later time.
Bad sound quality bei 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 lowes recommended bitrate for adequate sound quality. For good sound quality we recommend high bitrates like 320 kBit/s
USB Storage device is not recognised	**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 *Cala* 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 a UPnP-AV server to which the *Cala* will connect via your home network.
Problems occur with high-resolution audio formats (HD audio) (FLAC and WAV 192/32).	**Cause:** The *Cala* is receiving audio data via a WLAN connection. WLAN con-nections do not provide reliable quality, and in most cases are not adequate for HD audio. **Remedy:** If you want to play back HD audio formats via a network connection, please use a LAN cable network.

iPod

The iPod is not recharged.	**Cause:** An iPod connected to the USB socket is only charged if the *Cala* is switched on. **Remedy:** To recharge the iPod, please switch on the *Cala*.

Anhang / Appendix

Anschluss-Schema / Wiring diagram

UKW Antenne / VHF Antenna

RECHTER LAUTSPRECHER/ RIGHT SPEAKER

LINKER LAUTSPRECHER/ LEFT SPEAKER

Cala

SUBWOOFER (OPTIONAL)

UPnP-AV Server   Router   DSL Modem

*1

LAN
1 2 3 4   WAN

LAN   WAN

INTERNET

NAS Netzwerkspeicher/
Network Attached Starage device
(mit / with UPnP-AV Server)
*1

*2

externer USB Speicher /
external USB storage

*3

oder /
or

iPod
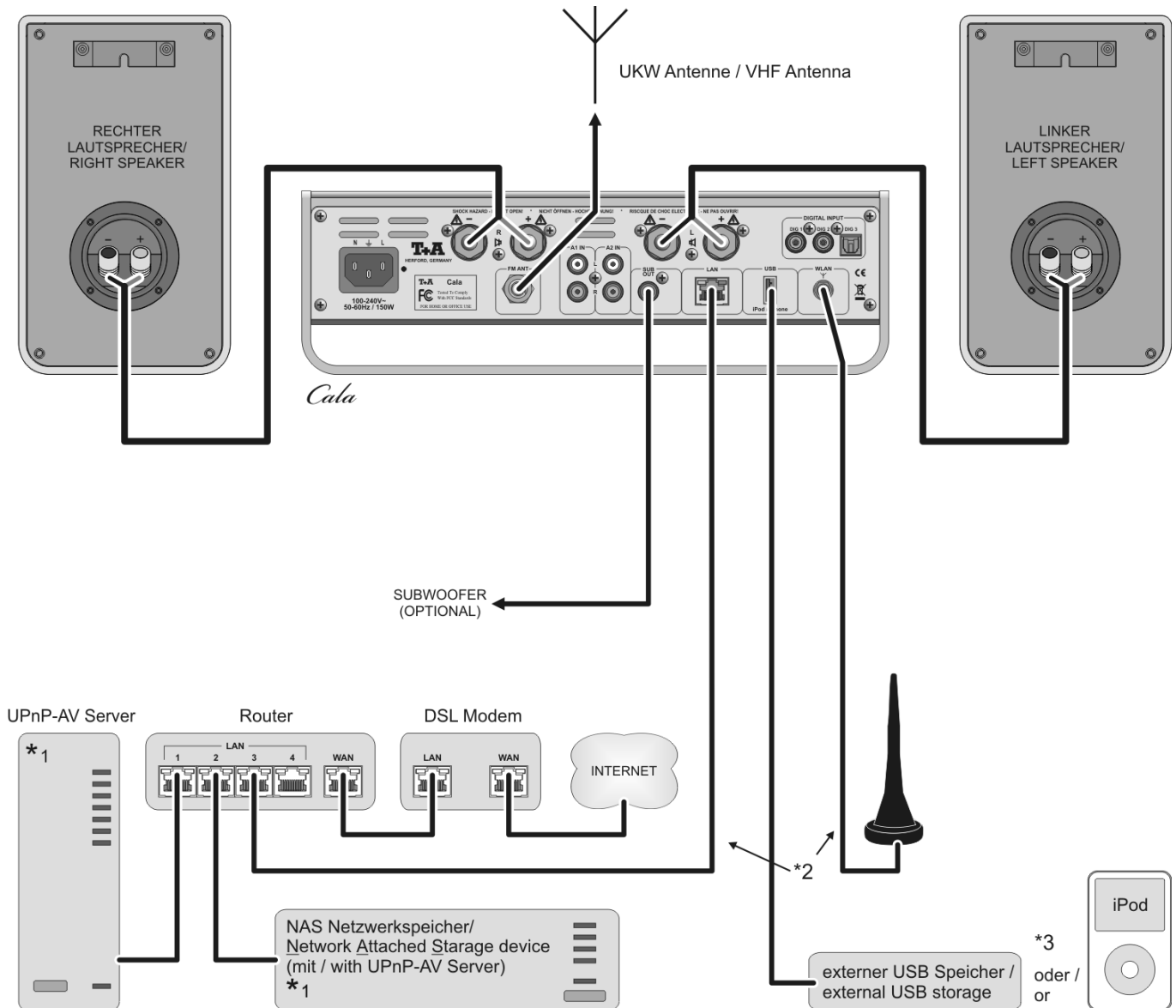
Achtung!
Ein funktionierendes Netzwerk mit Router muss vorhanden und betriebsbereit sein.
Für die Nutzung von Internetradio muss zusätzlich ein Zugang zu einem Breitband-Internet-Anschluss über den Router bestehen. Für Fragen bezüglich Einrichtung und Konfigurationen Ihres Netzwerks wenden Sie sich an Ihren System Administrator oder einen IT Spezialisten Ihrer Wahl.

*1 Musik Server mit UPnP-AV   Serversoftware

*2 Wahlweise LAN oder WLAN

*3 Wahlweise USB Speicher oder iPod

Attention!
A properly set up home network with router must be installed and in operation to use the *Cala*. 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 Optionally USB memory or iPod

Anschluss-Schema / **Wiring diagram**

externe Quellen / **external sources**

TV

Digital out
S/P DIF

HDMI

SHOCK HAZARD - DO NOT OPEN! * NICHT ÖFFNEN - HOCHSPANNUNG! * RISCQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR!

DIGITAL INPUT
DIG 1 DIG 2 DIG 3

N ⏚ L

R

A1 IN   A2 IN
L

T+A
HERFORD, GERMANY

FM ANT

L

R

SUB
OUT

LAN

USB

WLAN

CE

T+A   Cala
Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

100-240V~
50-60Hz / 150W

iPod / iPhone

Audio Gerät
mit analogem Ausgang /
Audio-device
with analogue output

R   L

Audio Gerät
mit digitalem Ausgang /
Audio-device
with digital output

Anhang / Appendix B

Technische Daten / Specification

Streaming Client		
Formate /Formats	MP3, WMA, AAC, AIFF, OGG-Vorbis, ALAC, FLAC + WAV (192/32 via LAN)	
Medienserver / Media server	UPnP AV, Media Player 10 (WMDRM10), vTuner Internet Radio Service, DLNA compatible servers	
Schnittstellen / Interfaces	USB 2.0, iPod über USB inkl. Steuerung, LAN, W-LAN	USB 2.0, iPod via USB with control, LAN, W-LAN
Bluetooth		
	A2DP Bluetooth Audioübertragungsprotokoll mit AVRCP Steuerung	A2DP Bluetooth audio transfer protocol with AVRCP
Radioteil / FM Tuner Section		
Empfangsbereich / Tuning range	87,5 – 108 MHz	
Empfindlichkeit / Sensitivity	2 dB µV	
RDS-Funktion / RDS functions	Stationsname, Radiotext, Uhrzeit	Station Name, Radiotext, Time
Verstärkerteil / Amplifier Section		
Eingänge / Inputs	2x AUX, 500mV….2,75 V / 20 kΩ einstellbare Empfindlichkeit. SP/DIF (16-24bit): 2x coax (192kHz), 1x TOS-Link (96kHz)	2x AUX, 500mV....2,75V / 20 kΩ variable sensitivity. SP/DIF (16-24bit): 2x coax (192kHz), 1x TOS-Link (96kHz)
Nennleistung pro Kanal / RMS power output per channel	55 Watt (4Ω)	
Klirrfaktor / T.H.D.	<0,02 %	
Sound Management	DSP gesteuerte Klangcharakteristiken	DSP controlled sound characteristics
Bass Management	Vollbereich, 40 Hz, 60 Hz, 100 Hz, 150 Hz	Full range, 40 Hz, 60 Hz, 100 Hz, 150 Hz
Ausgänge / Outputs	Cinch Subwoofer - Ausgang	RCA sub-woofer output
Netzanschluss / Power requirement	100 – 240 V, 50 – 60 Hz	
Leistungsaufnahme / Pwr consumption	max. 150 W Eco Standby <0,5 W Comfort Standby 4 W	
Abmessungen / Dimensions	9,5 x 30 x 21 cm	
Gewicht / Weight	4 kg	
Zubehör / Accessories	Systemfernbedienung FM100, WLAN Antenne, FM Antenne, Bedienungsanleitung	Remote control FM100, WLAN antenna, VHF antenna, user manual
Optionales Zubehör / Optional accessory	Lautsprecher CS Mini, iPod Dock	Loudspeaker CS Mini. iPod docking station

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

T+A elektroakustik GmbH & Co. KG

Herford

Deutschland   *   Germany