USER MANUAL

MP 1260 R

Software Version V 3.51

Order No. 9103-0397 UK

Welcome.

We are delighted that you have decided to purchase a T+A product. With your new **MP 1260 R** you have acquired a top-quality piece of equipment which has been designed and developed with the wishes of the audiophile music lover as absolute top priority.

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 **MP 1260 R**.

T+A elektroakustik GmbH & Co KG

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 **MP 1260 R** 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 **MP 1260 R** to your home network.

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

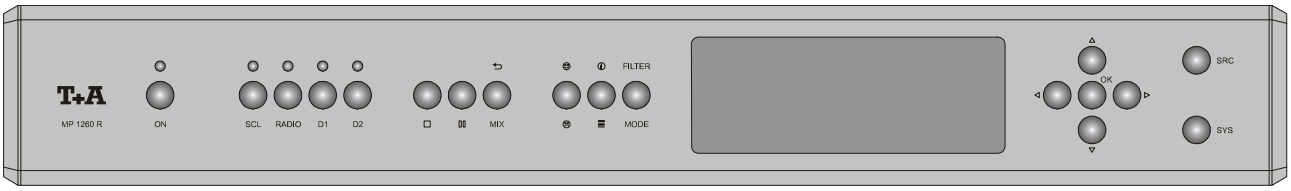
Symbols used in these instructions

Caution!

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

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

Front panel controls



All the important functions of the **MP 1260 R** can be operated using the buttons on the front panel. Direct-acting buttons are provided for fundamental functions such as source select and track select. Functions used not frequently are operated by menues which can be accessed by the (SRC) / (SYS) buttons.

All information relating to the machine's state, the current track and the associated transmitting station are displayed on the integral screen. The main information is displayed in a larger font to be readable more easily. The following section explains the functions of the buttons on the machine, and the information provided on the screen.

(ON)

(**On** / **Off switch**)
A brief press on the (ON) button switches the unit on and off. When the machine is switched on, the indicator light above the button glows.

Caution!
The mains button is not a mains isolation switch. Even when the LED is not glowing parts of the machine remain connected to the mains power supply (Standby mode). The stand-by current drain is stated in the chapter entitled 'Specification'.
If the unit is not to be used for a long period we recommend that you isolate it from the mains by pulling out the mains plug at the wall socket.
If the machine is switched off using the mains switch the energy consumption is 0 Watt. When switched off in this way, the unit cannot be switched on again using the remote control handset. If you wish to switch the unit on, first move the mains switch to the '1' position.

(SCL)

Selects the **MP 1260 R's** Streaming Client function (Internet radio, access to music server, iPod playback)

(RADIO)

Selects the FM tuner of the **MP 1260 R**.

(D1)

Selects the **MP 1260 R's** digital inputs 1.

(D2)

Selects the **MP 1260 R's** digital inputs 2.

(SRC)

Brief press: Opens the **'Source Select'** menu, enables selection of the listening source

Long press: Opens a context-sensitive menu

(SYS)

Brief press: Opens the System Configuration menu (see Chapters **'System settings (System Configuration Menu)'**)

Navigation

◀
Brief press: Back to the previous point / change button
Long press: Fast rewind: searches for a particular passage.
Tuner: Searching

▶
Brief press: Confirms input / change button
Long press: Fast forward: searches for a particular passage.
Tuner: Searching

▼
Selects the next point within a list / select button

▲
Selects the previous point within a list / select button

OK
Confirm button / Starts playback / halts playback (pause) / resumes playback after a pause

---

■
Ends playback

❚❚
Halts playback (pause) / resumes playback after a pause

↩ / MIX

Repeat functions (not possible with all media)

Brief press: Repeat Track, Repeat ALL, 'Normal'

Long press: *Mix*-Mode (Shuffle)

Brief button presses in MIX mode: Mix, Repeat Track, Reapeat Mix

If Streaming Client is selected, and the main menu is displayed:

Brief press: Toggle switch between inputs USB 1 and USB 2

☺ / ☹

Brief press: Adds a favourite to the Favourites list created on the **MP 1260 R**

Long press: Removes a favourite from the Favourites list created on the **MP 1260 R**

ⓘ / ☰

Brief press: During Streaming Client operation:
Toggles the display between the ‚Now Playing' view and track list / station list navigation.
During tuner operation:
Toggles between Mono and Stereo

Long press: Displays the Favourites list created on the **MP 1260 R**

FILTER / MODE

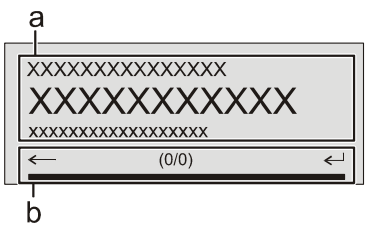
Brief press: Switches between the *Digital filters*

Long press: Only when connected to a WLAN network: switch display to field strength indicator (for WLAN antenna adjustment)

Display

All information relating to machine status, the current music track and navigation in lists is displayed on the **MP 1260 R's** graphic screen. The display is context-sensitive, and varies in part according to the capabilities and facilities of the service to which you are currently listening.

The most important pieces of information are displayed in a bigger font. Additional information is displayed by symbols. The meaning of the symbols is explained in the following table.



e. g.

The screen functions and symbols vary according to the currently active function (SCL, Digital IN), and according to the type of music being played.

The basic areas of the screen:

- Display field (a) shows information relating to the piece of music being played. The essential information is displayed enlarged in the main line.
- The bottom line (b) displays supplementary context-sensitive information and operating notes:

The screen can display the following symbols:

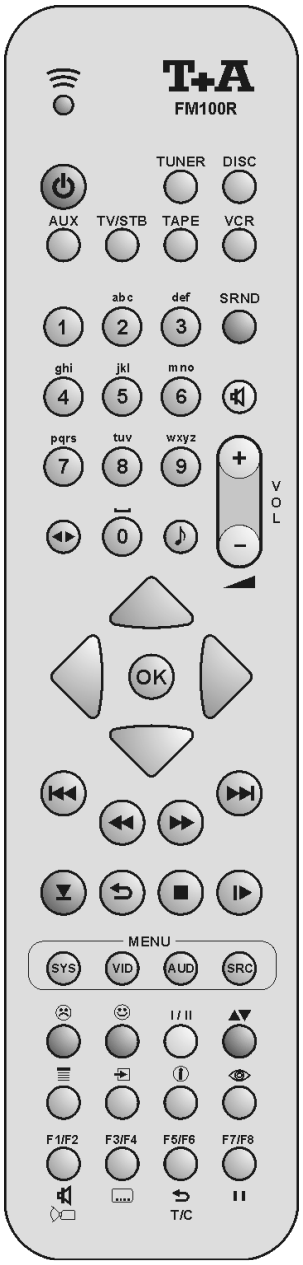
	Making connection (Wait / Busy) The rotating symbol indicates that the **MP 1260 R** is processing a command, or is making the connection to a service. These processes may take a little while, depending on the speed and current load of the network. During this period the **MP 1260 R** may be muted, and may not respond to commands. If this should happen, please wait until the symbol disappears.
	Indicates a **playable music track** or a **playback list** (Playlist)
	Indicates a **folder,** concealing further folders or lists.
	Indicates that the **MP1260R** is connected to the network by **cable LAN**.
	Indicates that the listen source is connected by **wireless WLAN**.
▶	Indicates that the **MP 1260 R** is playing a station or a music track.
II	Pause indicator
	Buffer display (full indicator, memory indicator) and (if supporterd by the source) indication of bit-rate of the stream. The higher the bit rate, the better the audio quality will be.
	Time display: elapsed playback time. This display is not available for all services.
←	Indicates that it is possible to switch to a higher menu level or select menu using the ◀ button.
0 / **0**	Position indicator in Select lists. The first figure indicates the current position in the list, the second figure the total number of list entries (list length).
↵	Indicates that the selected menu point / list point can be activated by pressing the ▶ button.
ABC or **123** or **abc**	Character input mode indicator
1 or **2**	Indicates which USB socket is selected
	Stereo indicator
●	Mono indicator

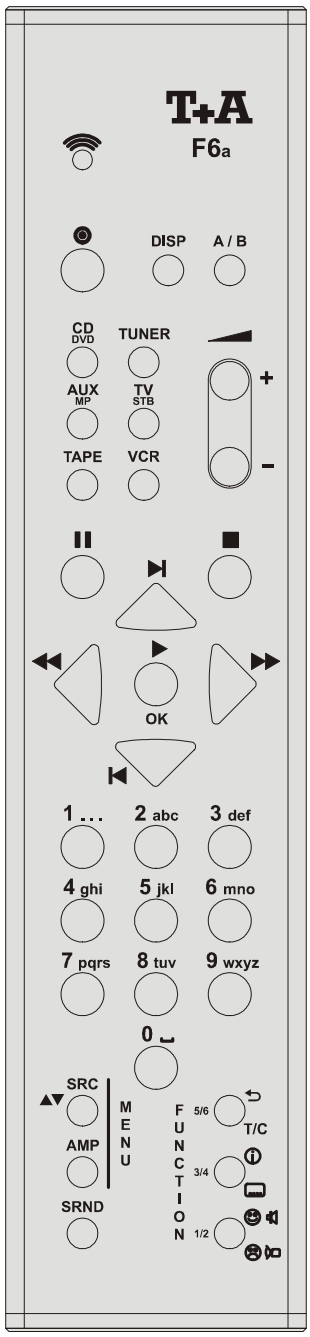
Remote Control

General Information

In general terms the remote control buttons have the same function as the corresponding buttons on the **MP 1260 R's** front panel.

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





FM100R	F6a	
Source buttons (eg. AUX)		Switch ON the **MP 1260 R** with the assigned source button (eg. AUX) See chapter **'Basic Functions of the MP 1260 R, System Settings (System Configuration menu), Menu item Divice Adr'** for details.
⏻	⏻	Switches the **MP 1260 R** off
OK	OK	- Starts a piece of music - Selects an Internet radio station - Confirm buttons during input process - Halts playback (pause) / resumes playback after a pause
■	■	Ends playback
▶❙	❙❙	Halts playback (pause) / resumes playback after a pause
▲	▶❙	- In a list or menu: selects the next item - During playback: next title (playlist) / next station (station list)
▼	❙◀	- In a list or menu: selects the previous item - During playback: previous title (playlist) / previous station (station list)
◀	◀◀	- Back to the next higher menu level - Hold button pressed in for rewind (FM100R ◀◀ - button too)
▶	▶▶	- Opens a folder - Starts a piece of music - Selects an Internet radio station - Hold button pressed in for fast forward (FM100R ▶▶ - button too)
1 2 abc ... 9 xyz 0 ␣	1 2 abc ... 9 xyz 0 ␣	- Direct alpha-numeric input, e.g. track number, fast station select, radio station. - The 0 and 1 buttons are also used for non-standard characters. During text input you can switch between numeric and alpha-numeric input, and between capitals and lower case by pressing the SRC button. - Storing and calling up a Preset Brief press: Calling up a Preset Long press: Storing a Preset
SRC	SRC	Brief press: Opens the source select menu Long press: While navigating through lists: Calls up the Search function (Alpha search) During playback: Calls up oversampling filter menu The menu points are called up using the ▲ / ▼ button, and can be altered using the ◀ / ▶ buttons. During character input operations: when pressed repeatedly this button toggles between numeric and alpha-numeric input, and between capitals and lower case
F5 / F6 (not possible with all media)	F5 / F6 (not possible with all media)	Repeated **brief presses** cycle through the repeat functions: → 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 repeated brief button presses cycle through the shuffle functions: → Mix, → Rpt Trk, → Rpt Mix **If Streaming Client is selected, and the main menu is displayed**: Brief press: Toggle switch between inputs USB 1 and USB 2
F3 / F4	F3 / F4	Brief press: During Streaming Client operation: Toggles the display between the ‚Now Playing' view and track list / station list navigation. During tuner operation: Toggles between Mono and Stereo Long press: Displays the Favourites list
F1 / F2 ☺	F1 / F2	Brief press: Adds a favourite to the Favourites list created on the **MP 1260 R** If the memory is full the display shows the message 'Favorite List Full'.
F1 / F2 ☹	F1 / F2	Long press: Removes a favourite from the Favourites list created on the **MP 1260 R**
👁	DISP	Switches the radio text function ON/OFF

Basic Functions of the MP 1260 R

There are a few basic functions of the **MP 1260 R** which are always available regardless of the selected source (Streaming Client, …). For example, these include the System Configuration menu, in which device settings such as screen brightness and language can be carried out.

System Settings (System Configuration menu)

In the System Configuration menu general device settings are adjusted. This menu is described in detail in the following chapter.

Calling up and operating the menu

- The menu is called up by briefly pressing the SYS button on the front panel
- When the menu is opened, the following select points appear on the screen:
  - Display Brightness (Screen brightness)
  - Language
  - Device Adr
- Use the ▲ / ▼ to select a menu point.
- To change a selected menu point, first press the OK button, then change it using the ◀ / ▶ buttons.
- To accept the setting, press the OK button after completing the change.
- You can press the ■ button at any time to interrupt the procedure, i.e. to conclude **without** accepting a change.
- Press the SYS button again to leave the menu.

Menu item
Display Brightness
(Screen brightness)

At this point you can adjust the brightness of the integral screen to suit your personal preference. Available settings are:
- Off
- Medium
- High

Menu item
Language

This menu item lets you select the display language for the **MP 1260 R**.
The language of data received from external sources (eg. iPod, UPnP-AV-server) depends on the settings of the external device and can **not** be selected in **MP 1260 R's** language menu.

Menu item
Device Adr

Here you can assign the source button which selects and activates the **MP 1260 R** as listening source.

The **MP 1260 R** must be connected to the corresponding audio inputs of your **T+A** amplifier or receiver.

Network Settings

The operation of this menu is described in detail in the chapter **Installation** / **Using the system for the first time, Network Configuration**.

Entering the network settings menu

- To enter this menu keep the SYS-button on the front panel pressed until the menu opens on the display.

D/A Converter Settings

A number of special settings are available for the **MP 1260 R's** D/A converter; they are designed to fine-tune the characteristics of your amplifier to suit your listening preferences.

Calling up and operating the D/A converter options

To enter the D/A converter options press the FILTER button on the front panel briefly.

During playback alternatively you can enter the D/A converter options by a long press on the SRC button of the remote control.

This action opens a set-up window in which the various options are displayed.

- Now use the ▲ / ▼ buttons to select a set-up option.
- In each case the displayed option can be altered using the ◀ / ▶ buttons.
- If no further action is taken for a period of a few seconds, the set-up window disappears again from the screen.

D/A set-up option Filter (OVS)

Pressing this button causes the currently active digital filter to be displayed on the screen for a period of about one second, e. g.: **'FIR lang'**.

During this period pressing the ◀ / ▶ button repeatedly calls up and selects the five available digital filters in turn. For more information on filters please refer to the Section **'Glossary / Supplementary Information, Digital filters'**.

Note:

A continuously glowing code number (**1** ... **4**) on the screen indicates the active filter.

D/A set-up option Output

At this point it is possible to toggle between normal and inverted phase in the signal.

With particular instruments or voices the human ear is certainly capable of detecting whether absolute phase is correct or not. However, absolute phase is not always correctly recorded. The problem can be corrected by pressing this button to invert the signal (i.e. turn it through 180°).

The correction is carried out at the digital level, and has absolutely no adverse effect on sound quality.

Operating the Streaming Client

General Information on the Streaming Client

The **T+A MP 1260 R** 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 **MP 1260 R**, 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 Con-figuration'**.

The **MP 1260 R'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 **MP 1260 R** 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 **MP 1260 R** can also play back high-resolution audio formats (FLAC and WAV up to 192 kHz / 32 bit). 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 high resolution 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 touch (all models)
iPod 5G
iPod classic (all models)
iPhone (all models)

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.

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.

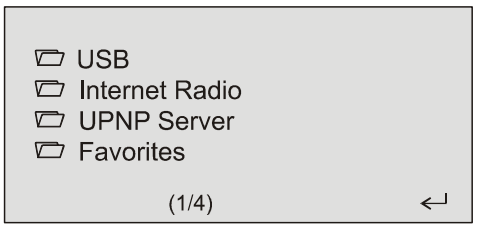
ⓘ The exact form of the displayed list and the preparation of the content also depend to a large extent on the capabilities of the server, i.e. the full facilities of the **MP 1260 R** cannot be exploited with all servers or media. You may therefore find that in many cases not all the functions described in these instructions can be used.

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

Main Menu
(Home-Menu)

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

- USB / iPod *1)
- Internet Radio
- UPnP-AV Server (Media server) in the local network *2)
- Favorites



*1) Only the selected USB input is displayed.
Use the F5 / F6 button to switch between the USB inputs.

*2) 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 ▶ 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 ▶ 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 **MP 1260 R's** letter search function at any time by briefly pressing the SRC button. The screen now displays the message 'Search _'. While this is on the screen, enter up to five letters or numerals using the remote control handset; the letters assigned to the numeric buttons are printed below the buttons. To obtain a particular letter, press the appropriate button repeatedly until the correct letter appears on the screen. Before entering the next character you have to wait until the cursor is displayed again. If you make a mistake, briefly press the ◀ button to correct it. When you are finished, confirm by pressing the OK button.

If the text searched for is not found the best matching result will be shown. You can abort the search using the ■ -button.

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 F1 / F2 remote control button / ☺ front panel button (brief press): this adds the station to the Favourites list.

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

Calling up Favourites

Open the Favourites list using the F3 / F4 remote control button / ≣ front panel button (lang press), 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 F1 / F2 remonte control button / ☹ front panel button 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 F1 / F2 remonte control button / ☹ front panel button before you erase or move files.

Using *Presets*

Preset function

You can store Internet radio stations as ***Presets*** using the process familiar from FM radio. These stations can subsequently be called up directly using the numeric buttons on the 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, hold a key 0 to 9 pressed until the massage **'Px stored'** appears. 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 **MP 1260 R** 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 **MP 1260 R's** main menu under the Internet Radio / Added Stations point.

The MP 1260 R as D/A Converter

General Information on D/A Converter Operation

The **T+A MP 1260 R** can be used as a high-quality D/A converter for other devices such as satellite receiver, digital radio etc. which are fitted with poor-quality converters or no converter at all. The **MP 1260 R** features two digital inputs on the back panel to allow this usage.

Devices with an electrical co-axial output or an optical light-pipe output can be connected to the digital inputs of the **MP 1260 R**. The **MP 1260 R** accepts digital stereo signals conforming to the S/P-DIF norm with sampling rates of 32 to 96 kSps at the optical TOS-Link input and 32 - 192 kSps at the coaxial SP/DIF input.

D/A Converter Operation

Selecting a D/A Converter Source

Select the **MP 1260 R** as listening source on your amplifier.

Now press the D1 or D2 button on the front panel to select one of the digital inputs. Alternatively you can open the source select menu by a brief press on the SRC button on the remote control. In this menu you can select the digital input which is to be played.

As soon as the source device delivers digital music data, the **MP 1260 R** automatically adjusts itself to the format and sampling rate of the signal, and you will hear the music.

Screen Display

During D/A converter operations the **MP 1260 R's** integral screen displays the characteristics of the digital input signal.

Operating the Tuner

RADIO

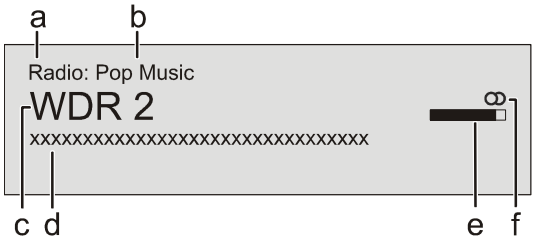
First select the integral tuner as source using the RADIO button on the front panel, or the SRC button on the remote control handset (Select source menu).

When you select a station, the integral screen initially shows the reception frequency or the *RDS* station name.

Front panel display

The screen on the front panel displays all information in a clear form.

Field strength display:



a) When you are listening to a radio station in Tuner 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.

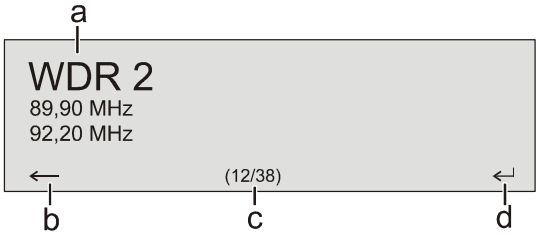
c) The frequency and / or the station name is displayed in enlarged form. If a station name is displayed, its frequency is shown at the end of the line.

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 **'ꝏ'** / Mono**'●'**

Selecting a station using the Favourites list:



a) The selected station is displayed in enlarged form, and can be called up using the ▶ / OK button.

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

c) Position display in the Favourites list.

d) Press the ▶ / OK button to select the station displayed in enlarged form.

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.

Favourites List and *Presets*

In addition to manual tuning and searching, the tuner of the **MP 1260 R** 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.

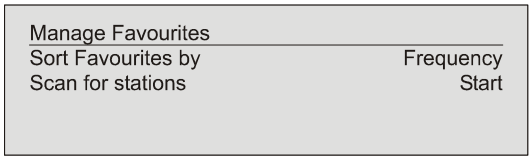
You can edit the Favourites list to suit your preferences (see section **'Adding stations to the Favourites list** / **Erasing stations from the Favourites list'**).

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.

The Favourites List

Creating the Favourites list

Once you have called up the Favourites list with a long press of the ☰ front panel button / F3 / F4 remote control button, you can call up the Favourites menu with a long press of the SRC front panel button. In the Favourites menu you can use the ▲ / ▼ buttons to select the following points:



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 **MP 1260 R** now automatically stores up to sixty receivable stations in the Favourites list.

Sort function

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

Frequency / Station name / Program ID

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 a long press of the ☰ front panel button / F3 / F4 remote control button, then use the ▲ / ▼ buttons to select a stored station from the Favourites list, and confirm your selection with the OK button.
- You can also select stations directly, without calling up the Favourites list as described above, by briefly pressing the ▲ / ▼ buttons.

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 you hear the station, you can include it in your Favourites list with a brief press of the F1 / F2 remote control button / ☺ front panel button.

Erasing stations from the Favourites list

Open the Favourites list. Select the station you wish to erase from the list, hold the F1 / F2 remonte control button / ☹ front panel 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.

Presets

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 remote control's numeric buttons 0 to 9.

Storing a *Preset*

- Select a station, either using the ◀ / ▶ buttons, or from the Favourites list.
- A long press of a numeric button (0 to 9) stores the Preset. The front panel screen briefly displays the message **'Preset Stored at'** to confirm this.

RDS functions

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

- Station name
- Radiotext
- Programm type (genre)

Mono / Stereo

You can toggle the tuner of the **MP 1260 R** between stereo and mono reception by briefly pressing the F3 / F4 remote control button / ◐ front panel button. The reception mode is shown on the screen by the following symbols:

'●' (Mono) or **'OO'** (Stereo)

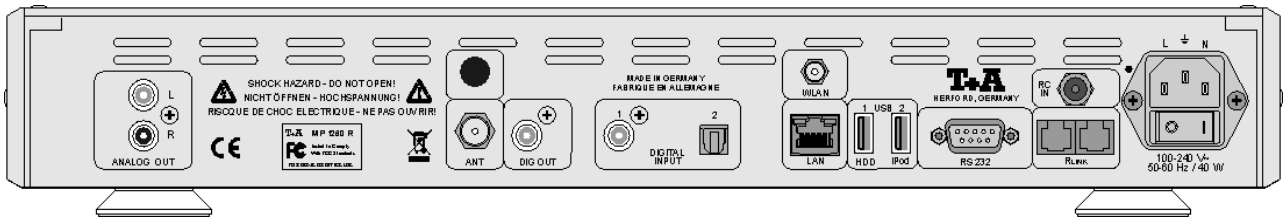
If the station you wish to listen to is very weak or very distant, and can only be picked up with severe background noise, you should always switch to MONO mode as this reduces the unwanted hiss significantly.

ⓘ 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.

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.

Back panel connections



ANALOG OUT

Analogue output

The output sockets should be connected to the appropriate input sockets of the pre-amplifier, integrated amplifier or receiver in accordance with their markings (L / R). Select the input sockets of the amplifier or receiver which correspond to the device address set in the **'Device address'** configuration menu (chapter 'Basic functions of the **MP 1260 R**') (in most cases the address AUX1 should be used for the **MP 1260 R**).

ANT

Space for input sockets of optional add-on modules (applies only to particular model variants).

DIGITAL OUT

Digital co-axial output for connection to an external digital/analogue converter with an co-axial cable.

DIGITAL IN

Inputs for digital source devices with optical or coaxial digital audio output.

WLAN

Input socket for WLAN antenna

ⓘ **Automatic Activation of the WLAN Module**

After powering on the **MP 1260 R** detects if it is connected to a wired LAN Network. If no wired LAN connection is found, the **MP 1260 R** will automatically activate its WLAN module and it will try to get access to your WLAN network.

⚠ **Attention!**

When WLAN shall be used, the LAN socket must be left unconnected.

LAN

Socket for connection to a wired LAN (Ethernet) home network.

ⓘ If a LAN cable is connected this will have priority over wireless WLAN networks. The WLAN module of the **MP 1260 R** will automatically be disabled.

USB 1

Socket for USB memory sticks and external hard discs

The storage device must be formatted with a FAT16 or FAT32 filesystem.

The USB device (example 2,5 inch HDD) can be supplied with power from the **MP 1260 R** via the USB socket provided the power consumption of the USB device conforms to the USB standard.

USB 2

Socket for iPods (use the original lead supplied with the iPod for this)

RS 232

Interface for firmware upgrades

In a **T+A** R-System the connection to a home automation system is accomplished through the RS 232 Interface (type MRA/C-K which is available as an optional accessory).

If the **MP 1260 R** is operated outside a **T+A** R-System, this interface can also be used for control of the **MP 1260 R** – for example in combination with a CRESTRON or AMX home automation system.

To enable device control via the RS232 interface, the **MP 1260 R** must be equipped with a special firmware. A description of the control interface and the control protocol can be found in the download section of the **T+A** website (http://www.taelektroakustik.de).

RC-IN

Control input for older **T+A** systems with RC control interface.
Connect this socket to the control output of your **T+A** amplifier – eg. The AUX1 control output (see chapter 'Appendix A, Wiring diagram: **MP 1260 R** in a **T+A** system with RC control').

If your **T+A** amplifier or receiver is equipped with a **R** LINK control output, please use the **R** LINK control. In this case the RC-IN socket may not be used.

Direct remote control with remote control set FBS6a (optional accessory)
If the **MP 1260 R** shall be operated ‚stand-alone' outside a **T+A** system, the remote control receiver type **E2000** from the remote control set FBS6a can be conected to the RC-IN socket.

R LINK

Control input / output for **T+A R** LINK – systems:
Both sockets are equivalent – one is used as input, the other one serves as output towards other **R** LINK devices
(see chapter 'Appendix A, Wiring diagram: **MP 1260 R** in a **T+A** system with **R** LINK control').

Mains input

The mains cable is plugged into this socket.

For correct connections refer to the sections '***Installation and wiring***' and '***Safety notes***'.

Mains switch

Not present on all model variants (depending on national safety rules).

For operation the mains switch (if present) is to be switched to the position marked 'I'.

Installation and wiring

Carefully unpack the **MP 1260 R** 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. When placing the unit on resonance absorbers or de-coupling components make sure that they do not compromise the stability of the unit.

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.

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 **MP 1260 Rs** 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:

To open the battery compartment disconnect the latch by pressing in, then lift the cover out. Remove the old cells and fit two 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.

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:

Always disconnect the unit from the mains supply before cleaning it.

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.

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

Das Gerät ist so aufzustellen, dass eine Berührung sämtlicher Geräteanschlüsse (insbesondere durch Kinder) ausgeschlossen ist. Die Hinweise und Angaben im Kapitel **'*Aufstellung und Verkabelung*'** sind unbedingt zu beachten.

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 disconnect it from the mains supply at the wall socket.

Mains leads / Mains plug

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

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

Enclosure openings

Liquid or particles must never be allowed to get inside the unit through the ventilation slots. Mains voltage is present inside the unit, and any electric shock could cause serious injury or death. Never exert undue force on mains connectors.

Protect the unit from drips and splashes of water; never place flower vases or fluid containers on the unit.

Supervision of device operation

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

Service, Damage

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

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

Over voltage

The unit may be damaged by excess voltage in the power supply, the *mains circuit* or in aerial systems, as may occur during thunderstorms (lightning strikes) or due to static discharges.

Special power supply units and excess voltage protectors such as the **T+A 'Power Bar'** mains distribution panel offer some degree of protection from damage to equipment due to the hazards described above.

However, if you require absolute security from damage due to excess voltage, the only solution is to disconnect the unit from the mains power supply and any aerial systems.

To avoid the risk of damage by overvoltages we recommend to disconnect all cables from this device and your HiFi system during thunderstorms.

All mains power supply and aerial systems to which the unit is connected must meet all applicable safety regulations and must be installed by an approved electrical installer.

ⓘ 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** and **2004/108/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

Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

(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 **MP 1260 R** can be operated in wired LAN networks (*Ethernet LAN* or *Powerline LAN*) or in wireless networks (*WLAN*).

If you wish to use your **MP 1260 R** in your home network, you must first enter the necessary network settings on the **MP 1260 R**. 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 **MP 1260 R** can also play back high-resolution audio up to 192 kHz / 32 bit in the 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 **MP 1260 R** 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 **MP 1260 R** 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 automatic selection of the type of connection (LAN or WLAN) can be disabled and set to a fixed value, e.g. LAN only. The setting can be changed under the menu item **'Netw. Mode'.**

Menu operation on the device

Alpha-numerical input using the front panel buttons

If you wish to enter data using the buttons on the front panel, the first step is to use the cursor buttons to select the menu point which is to be changed. Activate the menu point by briefly pressing the OK button, and then alter it using the ▲ / ▼ buttons (hold the button pressed in for a faster rate of change). Press the ▶ button to move to the next point. If you make a mistake, briefly press the ◀ button to correct it. When you are finished, confirm by pressing the OK button. You can switch between numbers, capital letters and lower-case letters by pressing the MODE button.

At certain points (e.g. IP address) it is only possible to enter a numerical string. At such points it is not possible to select letters.

Opening the Network Configuration Menu

First select the **MP 1260 R's** Streaming Client function by pressing the SCL button on the front panel.
Open the configuration menu with a long press on the SRC button on the front panel. You should now see the configuration menu on the front panel screen.

Operating the Menu, Changing and Storing IP Addresses

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

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

◀ / ▶ button	for simple selection (ON / OFF)
Numeric buttons 0 to 9 (remote control only)	for entering IP addresses
Alpha-numeric input (remote control only)	for entering text

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

Alpha-numeric entry (remote control only)

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 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 SRC button for toggling between numbers, capitals and lowercase 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 alphanumeric 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.

ⓘ **Alpha-numerical input without the remote control handset**

If you wish to operate the menus without using the remote control handset, please note that the **MP 1260 R** can also be controlled directly using the buttons on the front panel: see the section entitled **"Alpha-numerical input using the front panel buttons"**

Closing the Menu

Once you have correctly set all the parameters, select the menu point **'Save'**, then press the OK button. This action causes the **MP 1260 R** 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'**. Pressing the OK button at this juncture interrupts and closes the menu.

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

Setting the Parameters for a Wired Network

- Connect the **MP 1260 R** to an operational network or Power-Line modem using the LAN socket on the back panel.
- Switch the **MP 1260 R** on, and select the Streaming Client function by pressing the SCL button on the front panel.
- 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.

Network Parameter (LAN)		Possible entries
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)
Device Name	MP 1250 R	(0 ... 9, A ... Z)
Network Mode	Auto	◄ / ►
Save and restart	Apply	OK
Exit without saving	Apply	OK

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

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

Menu Point	Description
MAC	The MAC address is a hardware address which uniquely identifies your machine. The address displayed is determined by the manufacturer, and cannot be altered.
DHCP	**ON** If your network includes a DHCP server, please select the ON setting at this point. In this mode an IP address is automatically assigned to the **MP 1260 R** 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 **MP 1260 R**
IP mask	Network mask
Gateway	IP address of the router
DNS 1	Name / IP of the name server (optional)
DNS 2	Alternative name server (optional)
Proxy	**ON** if a proxy server is present, otherwise **OFF**
Proxy IP	Address of the proxy server
Proxy port	Port number of the proxy server
Device Name	Name of the device which appears in the network
Network Mode	Netwoksetting: only WLAN; or only LAN; or automatic setting
Save	Stores the network parameters, and restarts the **MP 1260 R** with the new settings.
Exit	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 **MP 1260 R's** WLAN aerial socket, and ensure that no cable is attached to the **MP 1260 R's** LAN socket.
- Switch the **MP 1260 R** on, and select the Streaming Client function by pressing the SCL button on the front panel.
- Now call up the Configuration menu as described above: with a long press on the SRC button on the front panel. You should now see the menu reproduced below, dis-playing the network parameters.

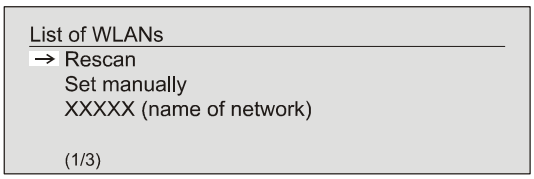
Network Parameter (WLAN)		
MAC	00:0e:9b:cc:a4:35	
→ WLAN configuration	start	none
DHCP	Off	◄ / ►
Device IP	192.168.0.10	(0 ... 9)
IP mask	255.255.255.0	(0 ... 9)
Gateway IP	192.168.0.1	(0 ... 9)
DNS 1	192.168.0.1	(0 ... 9, A ... Z)
DNS 2	0.0.0.0	(0 ... 9, A ... Z)
Proxy	XXX	◄ / ►
Proxy IP	192.168.0.1	(0 ... 9, A ... Z)
Proxy port	8080	(0 ... 9)
Device Name	MP 1250 R	(0 ... 9, A ... Z)
Network 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'**, and activate it by pressing the OK button.
A menu appears showing these points:

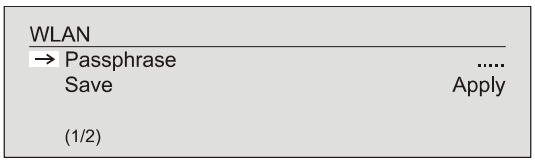
- Rescan - initiates new search for accessible radio networks
- Set manually - adding a WLAN manually

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



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)



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' and confirm with OK.

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

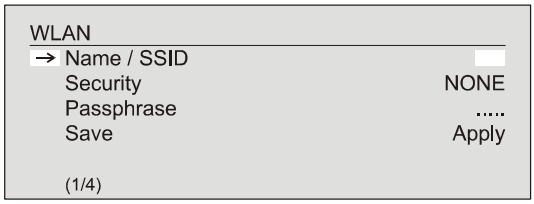
Please enter the settings for the remaining network parameters as described earlier in the section entitled **'Setting the Parameters for a Wired Network'**.

Storing Network Settings and Restarting

Finally select the menu point 'Save', and press the OK button; this action accepts the settings, and restarts the **MP 1260 R** with the new settings.

Special case:
Manual Network Entry

The **MP 1260 R** automatically searches for accessible radio networks, and lists them when you call up the menu point 'WLAN Configuration'. However, the **MP 1260 R** 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.



After successfully entering all the data, please select the point 'Save', and confirm by pressing the OK button. Your **MP 1260 R** 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'.

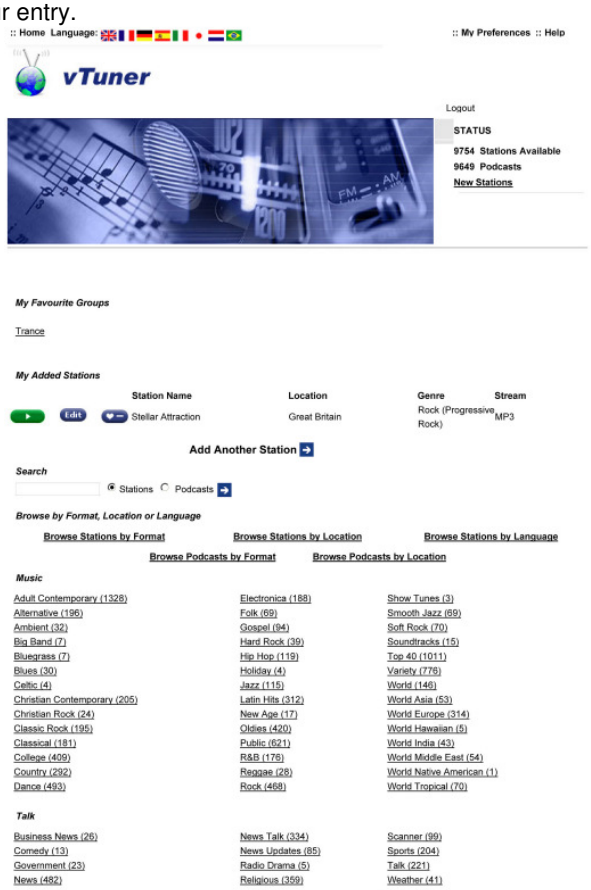
The vTuner Premium Service

The list of radio stations displayed by your **MP 1260 R** 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 **MP 1260 R**; the MAC address provides unique identification of your machine. The MAC address can be found in the Configuration menu (hold the SRC button on the front panel 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 **MP 1260 R** 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 **MP 1260 R**.

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 **MP 1260 R**. 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.

Assigning a Device Address

If the **MP 1260 R** shall be operated in a T+A system with **R** LINK or RC control, it is necessary to assign a device address in the System Configuration menu to the **MP 1260 R**.

Assigning a device address

- Open the menu by a brief press on the SYS-button on the front panel.
- With the ▲ / ▼ buttons select the menu item Device Address
- To change the address first activate this menu item by pressing the OK-button, then select the address with ◀ / ▶-buttons.

  You have the choice of the following device addresses:

  → CD → Tuner → Tape1 → Tape2 → TV → Aux1 → Aux2
  → Aux3 → DVD → STB → VCR → AuxAV1→ AuxAV2→ DBR

  Please select that device address which corresponds to the amplifier input the **MP 1260 R** is connected to. In most cases the AUX1 address will be the best choice for the **MP 1260 R**
- After selecting the desired address, please press the OK-button again to store your selection.
- To leave the menu, please press the SYS button.

ⓘ You can leave the menu any time without changing the address assignment by pressing the ■-button.

Activating optional functions

The **MP 1260 R** features the facility to release optional (extra-cost) functions by entering a four-digit code, such as the gapless function.*
This is the procedure for entering the code:

Activating optional functions (code entry)

- Switch the machine on using the ON-button, and immediately afterwards hold the ▼ button pressed in until the “Software Update Menu” appears.
- Use the ▼ button to move the arrow downwards on the screen until the menu point “Code” is selected.
- You will now see the message “starting SCL”, followed by “- - - -“ (or an already activated option; the latter can be overwritten)
- Activate the input process by pressing the OK button.
- Enter the first point using the ▲ / ▼ buttons.
- (Optionally using the 0 to 9 buttons on the remote control handset)
- Press the ▶ button to move to the next point.
- Repeat the procedure until you have entered the remaining points.
- To accept the code you have entered, press the OK button when you have finished the data entry process.
- The screen now displays “starting SCL”.
- When the code has been verified, you will see a message such as “GPL ok” for the release of gapless playback.

* This function may require a software update

ⓘ You can obtain the code required for the release process by completing an on-line form, which you will find on the T+A website **(www.taelektroakustik.de)** in the Support area under Hardware / Software. You can also contact us by telephone on [0049] 5221-76760, or by post.

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 (On LED does not light up).	**Cause 1:** Mains lead not plugged in correctly. **Remedy:** Check connection, push connector in firmly.
	Cause 2: Mains fuse burned out. **Remedy:** Have the mains fuse replaced by an authorised specialist workshop. The rating of the replacement fuse must agree with the specification printed on the unit.
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: No direct line-of-sight contact between remote control handset and receiver. **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.
	Cause 3: The **MP 1260 R's R** LINK socket is not connected to the amplifier's **R** LINK socket. **Remedy:** Check that the units are connected correctly. Push all plugs in firmly.
MP 1260 R does not switch on when the source button of the remote control is pressed.	**Cause 1: (R LINK System)** **R** LINK cable not connected. **Remedy:** Make all connections according to the wiring diagram: **MP 1260 R** in a **T+A** system with **R** LINK control (appendix A).
	Cause 2: (RC System) **RC** cable not connected. **Remedy:** Make all connections according to the wiring diagram: **MP 1260 R** in a **T+A** system with **RC** control (appendix A).
	Cause 3: (R LINK or RC System) Device address not assigned correctly. **Remedy:** Assign the device address to the **MP 1260 R** that corresponds to the amplifier input the **MP 1260 R** is connected to. (see chapter **'Assigning a Device Address'**).

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 **MP 1260 R** needs at least one properly connected network device. This can be a LAN or WLAN network or a USB storage device. **Remedy:** If the **MP 1260 R** 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 **MP 1260 R**. **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 **MP 1260 R** 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 netwerk (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 **MP 1260 R** 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 **MP 1260 R** will connect via your home network.
Problems occur with high-resolution audio formats (HD audio) (FLAC and WAV from 96/24).	**Cause:** The **MP 1260 R** is receiving audio data via a WLAN connection. WLAN connections 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.

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.

iPod

The iPod is not recharged.	**Cause:** An iPod connected to the USB socket is only charged if the **MP 1260 R** is switched on, and if the iPod is selected as listening source. **Remedy:** To recharge the iPod, please switch the **MP 1260 R** on and select the iPod as listening source.

Glossary / Supplementary Information

Digital filters

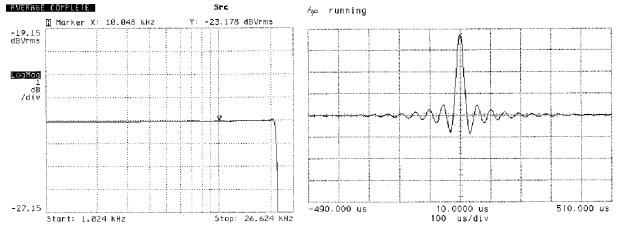
Digital audio signals are stored with a certain sampling rate of for example 44.1 kHz - i. e. for each second of music 44.100 sampled values are available for each channel. In the **MP 1260 R** the digital audio signals are converted (upsampled) to a much higher sample rate (352,8 or 384 kHz) before they are converted to analog signals by the D/A converter. This process delivers a very much better, more finely graduated signal to the converter, which can then be converted with correspondingly higher precision.

For the upsampling of the digital audio signals four different algorithms are implemented in the **MP 1260 R**. You can choose between these algorithms during music playback.

The different algorithms are described in more detail below.

Filter 1 (Standard FIR filter)

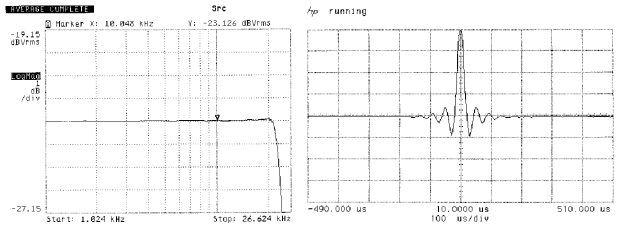
The long FIR filter is the standard oversampling process in digital technology, offering extremely linear frequency response, very high damping, linear phase characteristics and constant group delays. The disadvantage is the pre- and post-echoes which are added to the signal. These „time domain errors“ tend to affect the music signal’s dynamics, precision and naturalness, and reduce spatial orientation.



Frequency response and transient characteristics of the long FIR filter

Filter 2 (Impulse optimised filter)

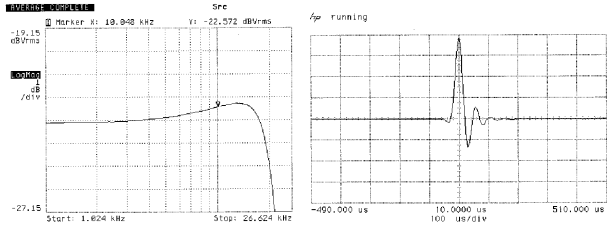
By shortening the filter length (lower number of filtercoefficients) the time domain errors are reduced resulting in a better impuls response (less filter ‚ringing‘) Acoustically such a shorter filter will have a slightly less accurate frequency response but higher dynamics and better imaging.



Frequency response and transient characteristics of the short FIR filter

Filter 3 (Bezier interpolator plus IIR filter)

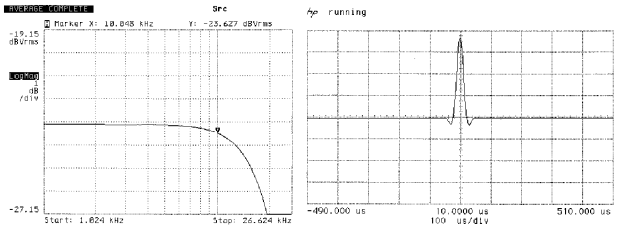
In this process an ideal Bezier interpolator is combined with what is known as an IIR filter. This eliminates the problematic pre-echo of the FIR method. This process produces highly „analogue“ system characteristics, with a sound quality and measured performance similar to those of good analogue disc players.



Frequency response and transient characteristics of the Bezier interpolator plus IIR filter

Filter 4 (pure Bezier interpolator)

This process delivers a perfect reconstruction of the original music signal. It exhibits no pre- or post-echoes of any kind, and does not add coloration or timing errors to the original signal. In sonic terms this method offers an impressive blend of naturalness, good dynamics and accuracy.



Frequency response and transient characteristics of the Bezier interpolator

R LINK

Control interface for remote control of **T+A** systems. The **MP 1260 R** receives the infra-red remote control signals and passes then on to the power amplifier and to the source devices.

Standby

The **MP 1260 R** can be switched on from the Standby state from the remote control handset.

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 number blocks each containing three digits 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.: **MP 1260 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 MP 1260 R** 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 MP 1260 R** 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.

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).

Client

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.

IP-Adresse

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.

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 **MP 1260 R** 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 **MP 1260 R** 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.

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.

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 **MP 1260 R** to access media files stored on these devices.

Examples for UPnP-AV server software compatible with the **MP 1260 R**:

Windows:

- **Twonky Media Server**
  http://www.twonkyvision.de/
- **Windows Media Player 11**
  http://www.microsoft.com/windows/windowsmedia/de/default.aspx

Linux:

- **Mediatomb**
  http://mediatomb.cc/
- **GmediaServer**
  http://www.gnu.org/software/gmediaserver/

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.

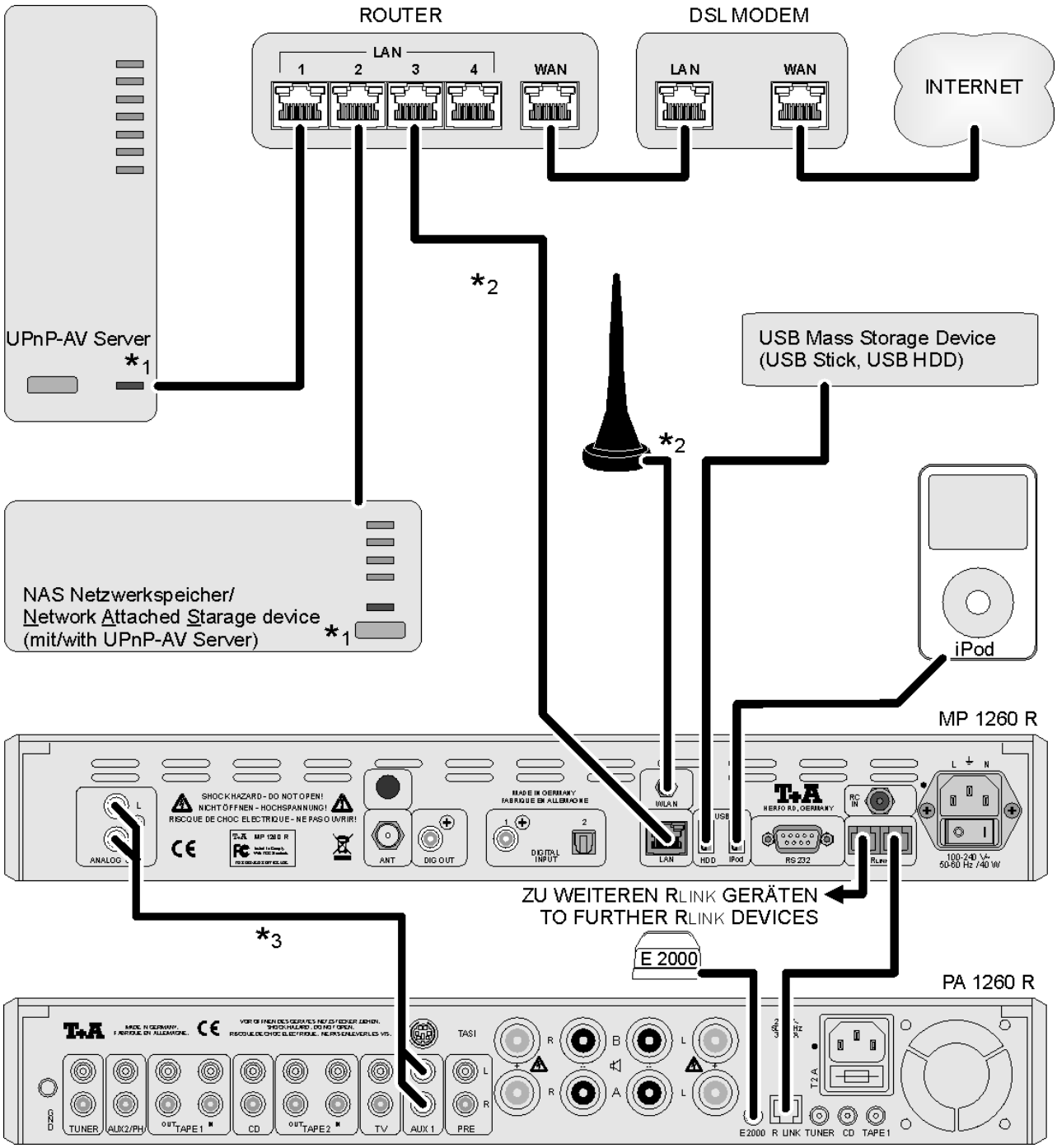
Compatible hardware and UPnP servers

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.

Anhang
Appendix

Anhang / Appendix A

Anschluss-Schema / Wiring diagram: MP 1260 R in a T+A system with R LINK control

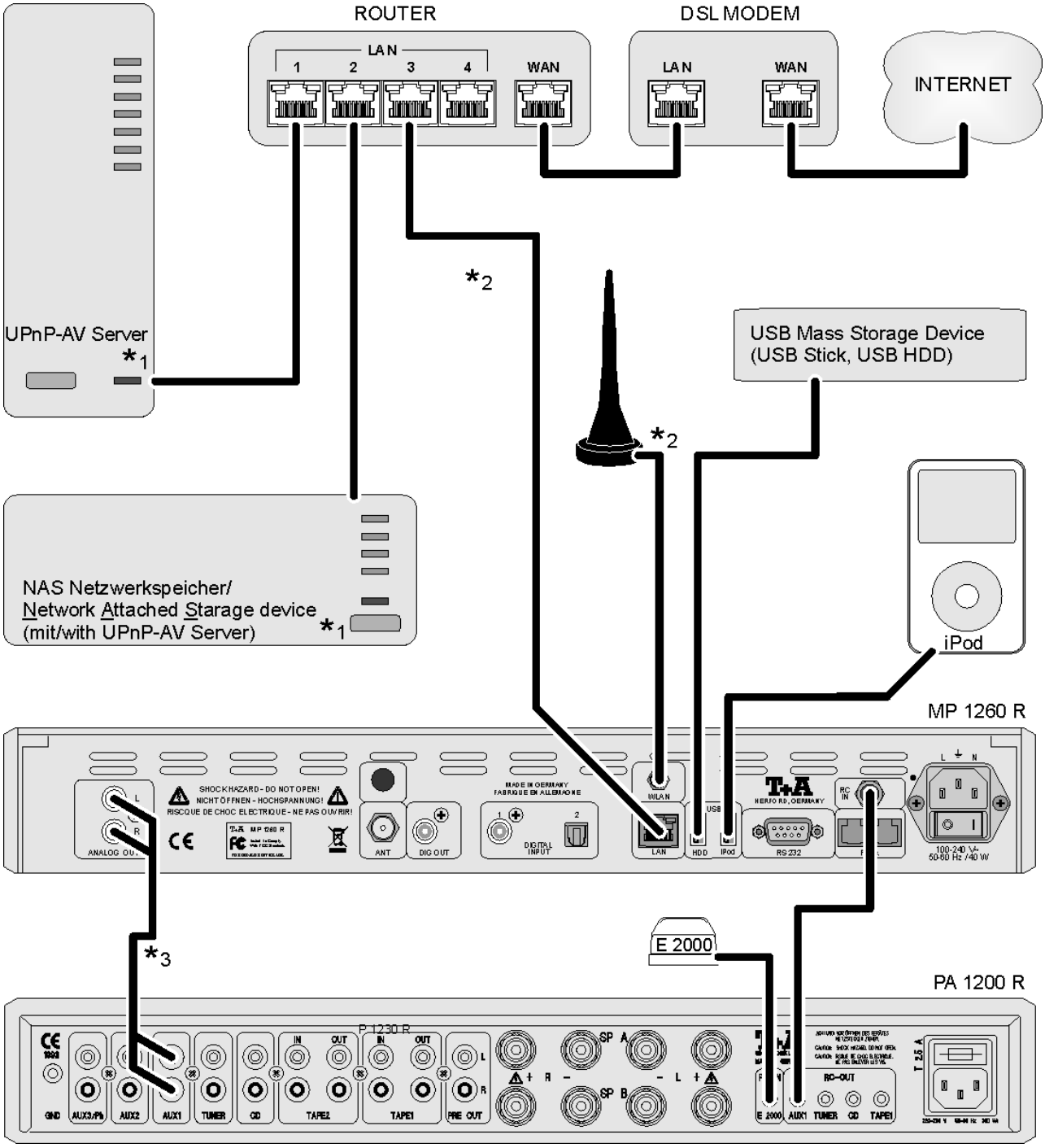


If the **MP 1260 R** is connected to the AUX1 input like in this example, the device address must also be set to AUX1 in the System Configuration menu.

If an other input is used please select the device address corresponding to this address.

* Please also refer to the notes on the following page.

Anschluss-Schema / Wiring diagram: MP 1260 R in a T+A system with RC control



Attention!

A properly set up home network with router must be installed and in operation to use the **MP 1260 R**.
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 Musik Server with UPnP-AV server software installed

*2 Connection either via Cable-LAN oder Wireless-LAN; FLAC / WAV from 96/24 via LAN only

*3 Please connect the **MP 1260 R** to the analog input corresponding to the device address that you assigned in the **'System Configuration, Device Adr'** dem **MP 1260 R** menu (normally AUX 1).

If the **MP 1260 R** is connected to the AUX1 input like in this example, the device address must also be set to AUX1 in the System Configuration menu. If an other input is used please select the device address corresponding to this address.

Anhang / Appendix B
Technische Daten / Specification

Audio Formate Streaming Client:	MP3(cbr+vbr), WMA, AAC, FLAC, OGG-Vorbis, WAV, AIFF, ALAC HD Audio via LAN + USB disc: FLAC / WAV 192 kHz / 32 Bit	
Internet radio Data Base	vTuner Internet Radio Service	
Unterstützte Medienserver / Supported Mediaserver:	UPnP-AV 1.1 and DLNA compatible servers, Microsoft Windows Media Connect Server (WMDRM10)	
Schnittstellen / Interfaces	Ethernet 10/100, WLAN 802.11b/g, USB 2.0, iPod, 2 x SP/DIF digital input	
Analogausgang Analogue output	2.5 V_{eff} / 22 Ω	
Digitalausgang / Digital output:	1 x coax, IEC 60958 (SP-DIF)	
Digitaleingang	1 x coax. IEC 60958 (SP-DIF) 1x optical IEC 60958 (SP-DIF / TOS-Link)	
Digitalfilter / Digital filter:	8 fach Oversampling mit 56 Bit Digital-Signalprozessor Vier unterschiedlichen Upsampling-Algorithmen.	8-times oversampling by 56-bit digital signal processor with four different oversampling algorithms,
D/A Wandler / D/A converter	Doppel-Differential-Modus, zwei Sigma-Delta Konverter mit 352,8/384 kHz / 32 Bit	Double differential mode, two Sigma-Delta converters with 352,8/384 kHz / 32 Bit
Analogfilter Analogue filter	phasenlineares Besselfilter, (konstante Gruppenlaufzeit) 3. Ordnung, 100 kHz Grenzfrequenz	Phase-linear Bessel filter (constant group delay), 3rd order, 100 kHz bandwidth
Frequenzgang (+0, -0,2 dB) Frequency response (+0, -0,2 dB)	2 Hz .... 80 kHz Obere Grenzfrequenz abhängig von der Abtastrat des Musikmaterials	Upper limit frequency dependent upon the sampling rate of the music material
Klirrfaktor / Intermodulation Total harm. distortion / intermodulation	< 0.001 %	
Geräuschspannungsabstand / Signal : noise ratio, A-weighted:	109 dB	
Kanaltrennung 1 kHz / 10 kHz / Channel separation 1 kHz / 10 kHz:	106 dB	
Netzanschluss / **Power requirement**:	100 - 240 V, 50 - 60 Hz	
Leistungsaufnahme / **Power con-sumption** max. Standby	40 W 1 W	
Zum Lieferumfang gehören / **Standard accessories**:	Netzkabel, **R LINK**-Kabel, WLAN Antenne, Betriebsanleitung, Aufkleber zur Konvertierung einer F6 Fernbedienung zur F6a, Garantie-anforderungskarte	Mains cable, **R LINK** cable, WLAN Antenna, user manual, Sticker to convert a F6 remote control to model F6a
Steuerschnittstelle / **Control interface:**	RS232 für Update und Steuerung (spez. Software-Version erforderlich)	RS 232 for firmware update and external control (special Software version required)

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

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