

## **dvbLiNK DVB-T2 tuner**

### **DVB-LINK51**



## **DVBT-T2 HEVC/H265/H264 compatible** **DVB-T MPEG2/MPEG4 compatible**

### **Product features**

- DVB-T2 HEVC/H265/264 compatible
- DVB-T MPEG2/MPEG4 compatible
- AFS - auto frequency switching
- Auto channel Search
- EPG - electronic program guide
- OSD language: German, English, French, Portuguese, Spanish, Italian, Dutch, Finish and many more
- Optional 5V phantom feed for active antennas
- USB port 2.0 for video-, audio- and image files (for USB media up to 2TB)
- Audio format: mp3, WAV, AAC
- Video format: MPEG-I/II/IV, VOB, AVI, DivX, Xvid, MKV, TS, MOV, RMVB
- Picture format: JPEG, BMP, GIF, PNG, TIFF
- Recording function for broadcasted TV
- Recording format: TSV (TV recording), TSA (Radio recording)
- IR-remote control

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## 1. Before the installation

### Important Safety Instructions and Caution



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk at electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance

**WARNING :** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Please read all information in this manual thoroughly. Familiarize yourself with the capabilities and the usage of your appliance before attempting to operate or maintain this unit. Taking a minute to do this now will help to prevent any damages or loss in the future.

- Keep this manual handy as a reference for operating procedures and safety information.
- Do not insert any kind of irrelevant objects into this device through the openings, as they may touch dangerous voltage points that could result in fire or electric shock.
- Avoid placing this unit near the liquids since it could result in the electric shock. Furthermore, the liquid splashes could damage the device and might cause smoke and overheat.
- Always submit yourself into the safe driving rules and follow all traffic regulation. If you experience any difficulties while operating the system please stop your car to make the necessary adjustments.

#### The safety

- Do not attempt to install or service your device on your own. Installation or serving by the people without proper training and experience in the electronic equipment and the automotive accessories may be dangerous and could lead into the risk of the electric shock and other hazards.
- If the receiver does not work properly, please disconnect the power plug for your safety and contact your local dealer immediately for further technical support.
- If any solid objects or liquids fall into the cabinet, please disconnect the unit and let it be checked by a qualified person before any further operation.

#### The placement

Do not install the in-car DVB-T receiver where it may

- obstruct the driver's vision,
- impair with the performance of any vehicle's operating system or the head unit, and
- impair with the driver's ability to safely operate the vehicle.

## Legal Information

By law, watching moving pictures while driving is prohibited, the driver mustn't be distracted. We do not assume any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. Apart from using this product in an unmoved vehicle, it should only be used to display fixed menus or rear-view-camera video when the vehicle is moving (for example the MP3 menu for DVD upgrades).

Changes/updates of the vehicle's software can cause malfunctions of the interface. Up to one year after purchase we offer free software-updates for our interfaces. To receive a free update, the interface has to be sent in at own cost. Wages for de-and reinstallation and other expenditures involved with the software-updates will not be refunded.

## Delivery contents



### **Delivered accessories:**

- **DVB-LINK51 Tuner**
- **Power harness**
- **IR sensor with extension cable**
- **IR remote control**
- **Manual**

## 2. Antenna positioning

When working with DVB-T products, how and where to position antennas to achieve the best possible reception performance, is a frequently asked question.

Nevertheless, there is no single best working global solution because DVB-T broadcasting is not really standardized and varies even within one country from region to region. Further, the highest reception performance usually requests a higher visibility of the antennas which is usually rejected by the vehicle owners.

The following rules which derive from our testing experience may help to find your personal best mix of reception performance and visibility of antennas.

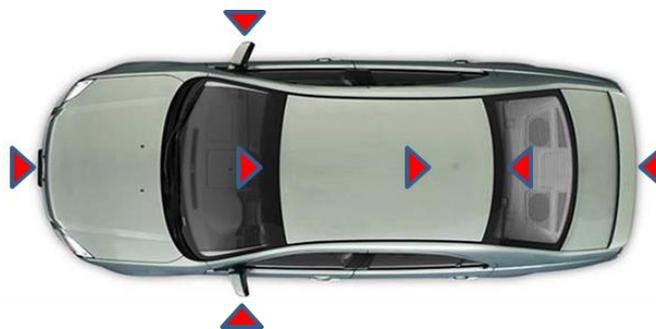
**We strongly recommend to first test your chosen antenna positions before the final installation!**

### Glass-mount antennas

1. Make sure that the windows, the antennas are mounted on, are not metal coated (e.g. dark foil or anti-sun coats might contain metal)
2. Choose opposite windows for installation (e.g. front and back or left and right). Best is front right and rear left.
3. In most areas there is a vertical broadcasting, therefore mount vertical. If broadcasting is mixed or horizontal try also horizontal positions.
4. Installing in a low position of the window will entail a higher performance.
5. Installing with some distance to the window frame will entail a higher performance, too.

### Alternative antenna positions

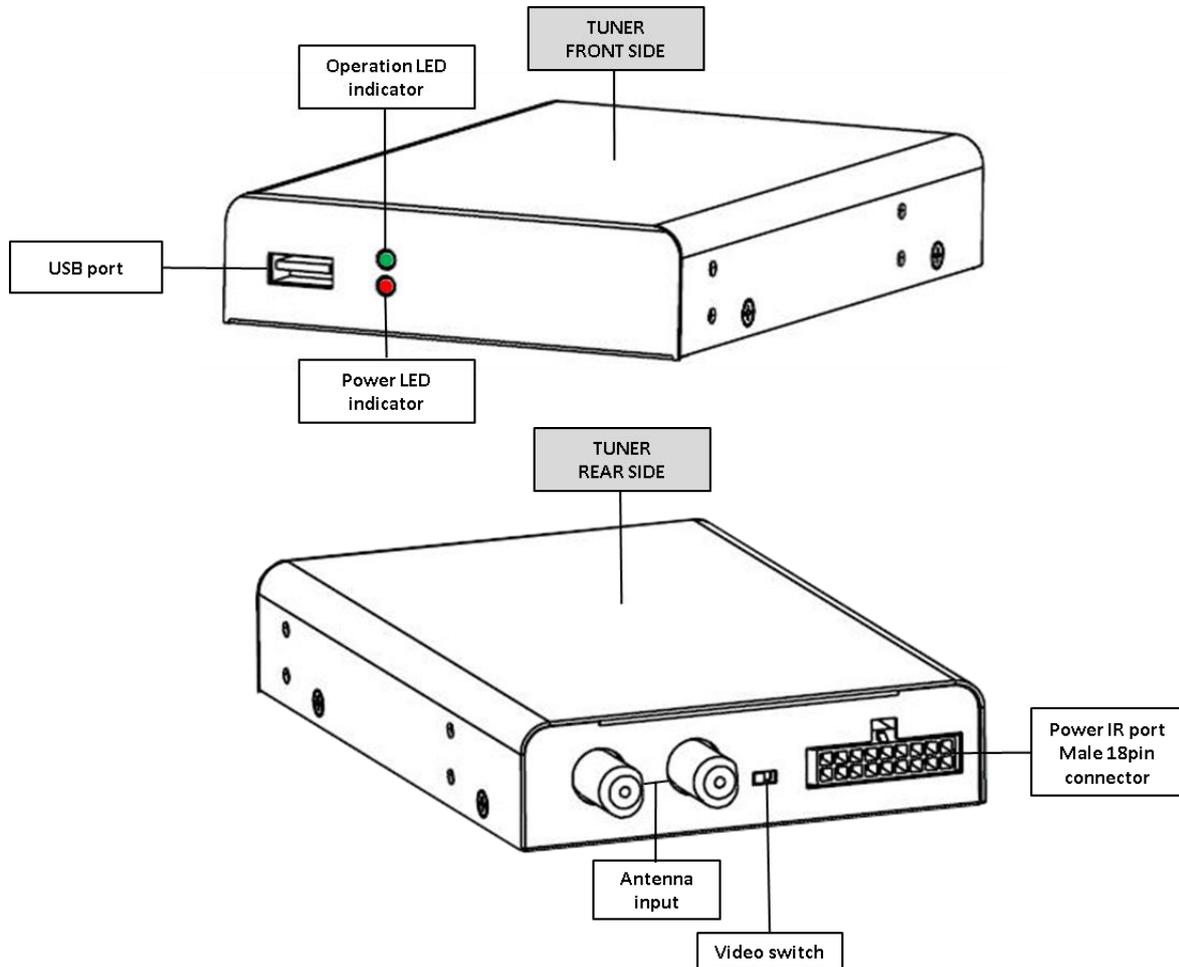
1. External roof-mount antenna – best reception
2. Flexible waterproof antenna inside side the rear-view mirrors – very good reception, please test before, as metallic paint and mirror parts may disturb the reception.
3. Waterproof antenna in bumper – Despite the perfect invisibility we don't advise this option, as the reception is usually lower because of the low mounting position. Might be hard to position antennas vertically.



**Important note for amplified Antennas:**

**Depending on the settings the tuner will deliver +5V power supply for an amplified antenna. This function only works if the antenna is connected to the tuner at the first step, that means before the tuner's power connection is done!**

## 3. Tuner and connections



### **USB port**

The USB port enables media input, TV recordings, and software upgrades.

### **Operating LED (green)**

The light indicates whether the system is working or not.

### **Power LED (Red)**

The light indicates whether the 12V power supply has been applied to the device or not.

### **Antenna in**

Antenna input port (NOTE: the unit provides +5V antenna power through this connection port.)

### **Video switch**

Position 1 – without video amplification. When connected to only one monitor.  
Position 2 – with video amplification. When connected to two monitors.

### **Power/IR Port**

Main connector for power supply, video, audio and remote IR Receiver.

## Connections

### Audio-video output (RCA)

cable colour	assignment
● yellow	video-signal
● red	audio-signal right
● white	audio-signal left

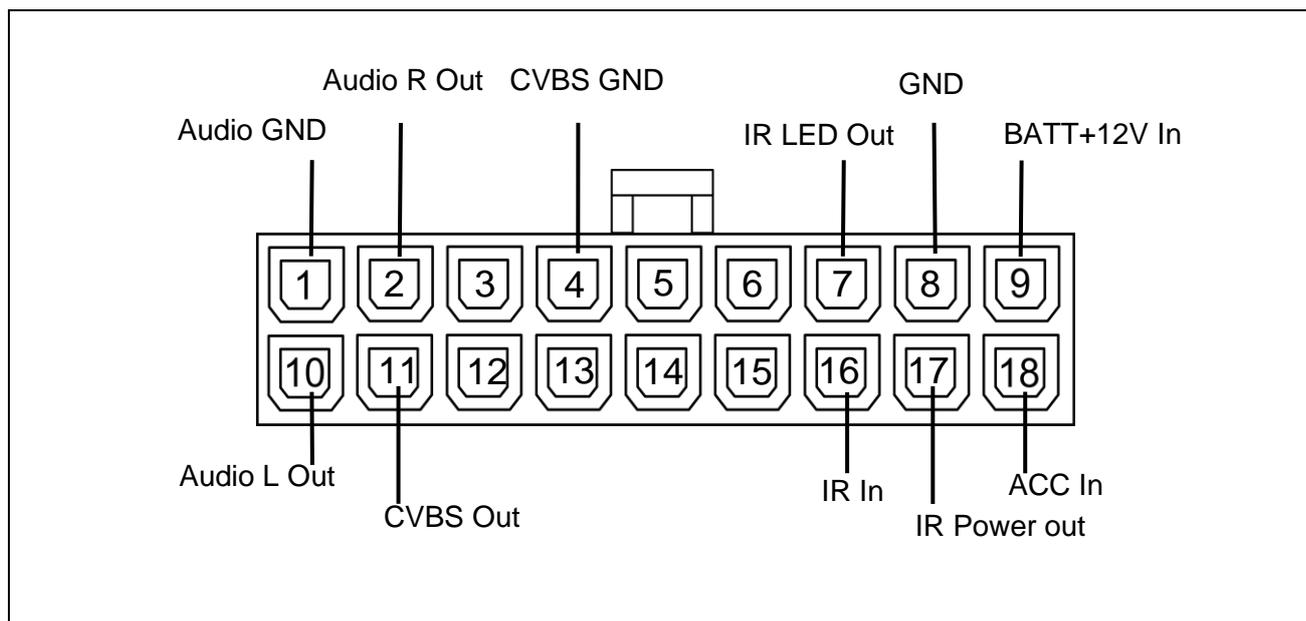
### Connection for power supply

cable colour	assignment
● black	Ground
● gelb	+12V permanent
● rot	+12V ACC
● blue	IR-signal - Cable for connection of IR-control cable STA-4M to xLOGiC interfaces with device control (e.g. c.LOGiC)

### LEDs

Signal	Function
both LEDs are off	ACC off, Tuner off
red LED is on	ACC +12V connected, usbLINK3 off
red and green are on	ACC +12V connected, usbLINK3 on

## Pin configuration – 18pin connector



1	Audio Ground
2	Audio R output
3	N/A – no function
4	Video CVBS signal Ground
5	N/A – no function
6	N/A – no function
7	IR LED power out +5V
8	Ground – to vehicle’s ground
9	+12V Input – to +12V permanent power
10	Audio L output
11	Video CVBS signal output
12	N/A – no function
13	N/A - no function
14	N/A - no function
15	N/A - no function
16	IR Data Input - Infrared data of the IR receiver
17	IR Power Output - Power of the IR LED +5V
18	ACC Input –to +12V accessory power supply

## 4. Operation

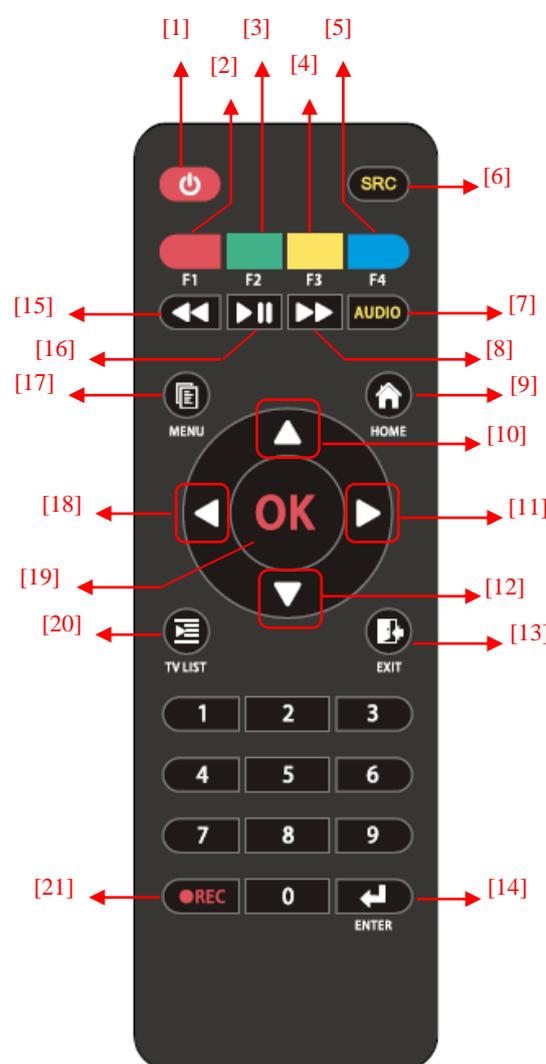
### Remote control -description

Before attempting to operate your remote control, install the batteries as described below:

1. Turn the remote control face down.
2. Press down on the ridged area of the battery cover and slide it off.
3. Insert the batteries obeying the polarity.
4. Slide the battery cover back into its position on the remote control.

### Remote control description

No	Button name	Function
1	Operation	Select operation or stand-by mode
2	Red button	Subtitle key
3	Green button	No function
4	Yellow button	No function
5	Blue button	No function
6	SRC	No function
7	Audio	Select second language and stereo audio
8	FF 	Fast Forward
9	Home	Go to the home screen
10	▲	Next TV channel / up in the menu*
11	▶	+ volume TV / to the right in menu the cursor right*
12	▼	Previous TV channel / down in menu*
13	Exit	Exit the current menu
14	Enter	To enter the selected item
15	FR 	Fast Rewind
16	Play/pause	Select play and pause
17	Menu	Enter the setup menu
18	◀	- volume TV / to the left in menu*
19	OK	Open channel info / confirm menu*
20	TV list	TV channel list (EPG)
21	REC 	TV recording start / stop



\*The function of ▲,▶,▼,◀ buttons vary in the modes movie and music (see according chapter).

## 5. Home Menu

This is the home menu screen. You can highlight the TV mode, the video playback mode, the music playback mode, and the system settings. Use the [◀] and [▶] buttons to highlight the desired mode and then press the [OK] button to enter the desired mode.



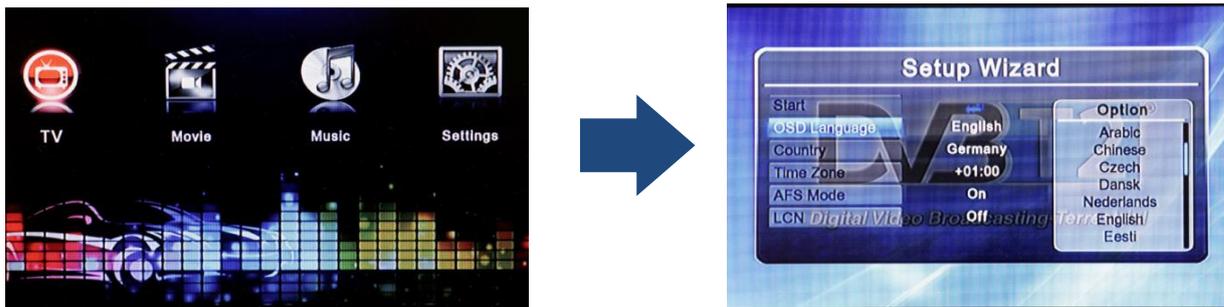
	<b>TV Mode</b> To enter the TV mode.
	<b>Movie Playback Mode</b> To enter the movie playback mode and to watch the movie files.
	<b>Music Playback Mode</b> To enter the audio playback mode and to listen to the music.
	<b>System Settings</b> To configure the device settings.

*Note: Press the [HOME] key to return to the home screen anytime.*

## 6. First operation - Quickstart

The first operation includes the selection of the country, the OSD Language, the located region and whether it's the summer time or not at the present.

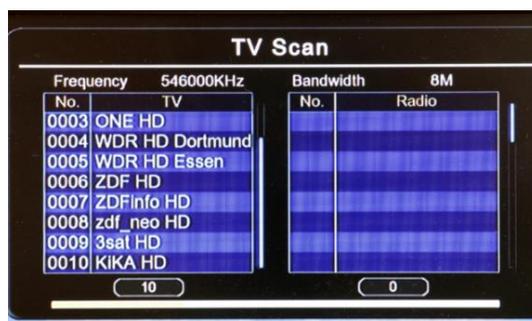
Press the [◀] and [▶] buttons to select the "TV" option and press the [OK] button to enter the TV mode. Within the first operation, the "Setup Wizard" screen shows up.



Use the [▲] and [▼] buttons to highlight the item.  
Use the [▶] button to set the highlight item.  
Press the [▲] and [▼] buttons to browse up and down the options.  
Select the option by pressing the [OK] button.  
Exit the setting by pressing the [MENU] button.

*NOTE: The time zone setting will be automatically updated once the Region setting is changed.*

The auto start will find available DVB-T2/DVB-T channels within the first operation (Refer also to chapter "AFC Auto Frequency Switching").



1. Use the [▲] and [▼] buttons to highlight the start button.
2. Press the [OK] button to start and your device will automatically start searching for the available TV channels in your area.
3. Exit the setting by pressing the [MENU] button.

## 7. TV Recording

While watching TV, press **[REC]** to start the recording of a TV program. The timer menu will appear on the lower left screen. This timer menu will automatically disappear if no operation is performed within 10 seconds. You can simply call the timer menu out with press **[REC]** again.



In the timer menu, you may use **[▲]** and **[▼]** to select the recording time. Then press **[OK]** to start the recording with selected timer. The icon **REC** will appear on the left upper screen. The information of current recording time will be shown beside the **REC** icon.



*NOTE: Please ensure that a USB Storage device is connected to the unit before recording. While turn off the ACC/IGN, the unit will continue recording if recording time not over yet. The unit will automatically turn off while the recording is finished.*

To stop recording, please select the "STOP" item in timer menu.

Recorded TV programs can be played back in Movie mode.



*Note: A recorded program will be stored in a default folder named "PVR". The file types will have ".TSV" file extension for TV program.*

*The file will be named as:*

**"Channel Name (Recorded Date Recorded Time)"**

*The maximum file size of FAT/FAT32 is 4 GB, if the file exceeds this size, the system will cut the recorded file into 2 files.*

*1 GB storage can be used to do the recording for approximately 45 minutes.*

*The storage files system can support FAT/FAT32/NTFS format.*

*Generally all USB 2.0 flash drive can be used as storage devices. However, there are cases when the USB flash drive can't store recorded programs from the TV receiver unit. It's strongly suggested to format the USB storage device by PC or laptop before it's inserted into the TV receiver unit.*

## 8. Movie

The section below will explain how to quickly play a video file, stored on an USB device.

Press the **[Home]** button to get back to the home screen. Select **“Movie”** and then press the **[OK]** button to enter the Movie function



*NOTE: Make sure that your USB device is already plugged into the receiver's USB port, otherwise this function cannot be used.*

In Stop mode, browse the available video files and folders which appear on the screen.

In Playback mode, they upward can be watched in full screen mode.

The function of the remote control's **▲,▶,▼,◀** buttons vary in Stop mode and in Playback mode.



### Arrow buttons function in Stop mode

- [▶]** Move cursor one row downward
- [◀]** Move cursor one row upward
- [OK]** Playback the according video / open the according folder
- [▼]** Move cursor downward several rows
- [▲]** Move cursor upward several rows

### Arrow buttons function in Play mode

- [▶]** Increase volume
- [◀]** Decrease volume
- [OK]** Playback the according video / open the according folder
- [▲]** Video back - Playback the list's video in the upper row of the current video
- [▼]** Video forward - Playback the list's video in the lower row of the current video
- [EXIT]** Stops the playback and returns to the list in Stop mode

*NOTE: In this mode, the user can only playback video files. Music files are not supported.*

## Operating the Movie playback mode:

1. Press the **[FR]**  and **[FF]**  button to increase or decrease the speed of track.
2. Press the **[PLAY/PAUSE]**  button to pause or resume the movie playing.
3. Press the **[REC]**  button during the Playback to show the subtitles.

Press the menu button while in playback mode to enter the Movie menu, which gives you the following options:

Movie Menu	Options	Result
Playing Mode	Off	The video file will be played according to the video list
	Shuffle	The next video file will be played randomly
Repeat mode	Repeat–OFF	The device will stop, right after playing one video file
	Repeat–One	The device will repeat one video file that is currently being played continuously.
Aspect Ratio	Repeat–Dir	The device will repeat all of the video files in one directory that is currently being played continuously.
	Full Screen	The video picture will be displayed in full screen
	16:9 4:3LBand4:3PS	The video picture will be displayed according to the selected ratio
Equalizer	Classic Dance Jazz Live Pop Rock Soft	To choose the different sound options
Surround	Off Arena Bathroom Cave Church Concert Hall	To choose the different surround options
Audio	Stereo Left Right	Sound will come in stereo from left and right speakers The left channel's sound will appear on both speakers The right channel's sound will appear on both speakers
Subtitle	Languages	Choose one of the available subtitles.

## 9. Music

The section below will explain how to quickly play a music file stored on an USB device.

Press the **[Home]** button to get back to the home screen. Select “Music” and then press the **[OK]** button to enter the music function



*NOTE: Make sure that your USB device is already plugged into the receiver's USB port, otherwise this function cannot be used.*

Browse the available music files and folders which appear on the screen. In Playback mode, the -symbol appears in front of the current playing title.

The function of the remote control's , , ,  buttons vary in Pause mode and in Playback mode.



### Arrow buttons function in Stop mode

-  Move cursor one row downward
-  Move cursor one row upward
- [OK]** Playback the according title / open the according folder
-  Move cursor downward several rows
-  Move cursor upward several rows

### Arrow buttons function in Play mode

-  Move cursor one row downward
-  Move cursor one row upward
- [OK]** Playback the according title / open the according folder
-  Title back - Playback the list's title in the upper row of the current title
-  Title forward - Playback the list's title in the lower row of the current title

*NOTE: In this mode, the user can only playback music files. Video or image files are not supported.*

## Operating the Music playback mode:

1. Press the **[FR]**  / **[FF]**  button to increase or decrease the speed of track
2. Press the **[PLAY/PAUSE]**  button to pause or resume music playing.

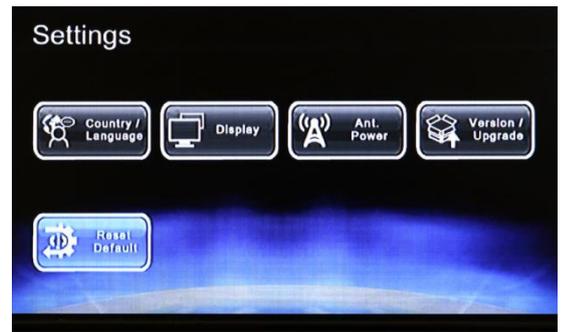
Press the menu button while in playback mode to enter the Music menu, which gives you the following options:

Music menu	Options	Result
Playing mode	Off Shuffle	The video file will be played according to the music list The next music file will be played randomly
Repeat Mode	Repeat–OFF Repeat–One  Repeat–Dir	The device will stop, right after playing one movie file The device will continuously repeat the currently played music file The device will continuously repeat all of the music files in the directory
Equalizer	Classic Dance Jazz Live Pop Rock Soft	To choose the different sound options
Surround	Off Arena Bathroom Cave Church Concert Hall	To choose the different surround options

## 10. Settings

This is the system's "settings" menu screen. The users can adjust the country/language setting, the display setting, the Antenna power setting, the reset default, and also proceed to a software upgrade.

Use the [▶] and [◀] buttons to highlight the desired item and press the [OK] button to enter one item.



### Country/Language

To set up the OSD language and regional settings

1. Press the [▲] and [▼] buttons to highlight the item you want to adjust.
2. Press the [▶] button and use the [▲]/[▼] to browse up and down the options.
3. Select one option by pressing the [OK] button or exit the setting by pressing the [EXIT] and [MENU] button.
4. After adjusting, press the [EXIT] and [MENU] button to exit the "Country/Language" menu.



Note: The frequency range for Germany is limited to 474 – 778 MHz. In case that on Band III an expanded range of 786 – 850 MHz is needed, choose a different country (e.g. Austria) and start scanning again.

### Display

To set up and adjust the image with preference.

1. Press the [▲] and [▼] buttons to highlight the setting that you want to adjust.
2. Press the [OK] button and use the [▲] and [▼] to browse up and down the options.
3. Select the option by pressing the [OK] button or exit the setting by pressing the [EXIT] and [MENU] button.
4. After adjusting, press the [EXIT] and [MENU] button to exit the "Display" menu.



## Antenna Power

### To set up the 5V power feed for amplified antennas

1. In the “Ant.Power” menu use the [▶] button, to highlight the “Ant. Power” settings.
2. Press the [▲]and[▼] button to highlight the desired setting option and select with [OK].
3. Press the [MENU]and[EXIT] button to exit.

If the power is set to “on”, it means that the antenna will receive +5V from the tuner to empower the signal. We suggest to keep this antenna power on to have a better signal reception.



*Important note: If an amplified antenna has not been connected to the tuner before the tuner's 12V power connection, the necessary +12V power supply won't succeed! To guarantee the necessary phantom power supply, either the connection of the antenna has to be done as the first step, or alternative performing the system's power reset would be a solution.*

## AFS Auto Frequency Switching

To automatically switch to the most signal powered frequency, depending on the reception area's signal strength.

AFS – “Auto Frequency” Switching is an intelligent function which allows using always the strongest signal of a selected service by scanning all other frequencies, the selected service is currently available. All same services are merged to only one visible station. All available frequencies are handled by the system in a not visible data base.

1. In the TV menu (refer also to chapter “TV menu”) choose the point “**AFS Settings**”, then choose “ ” and select with **[OK]**.
2. Choose **[Yes]** to restart the channel search again.

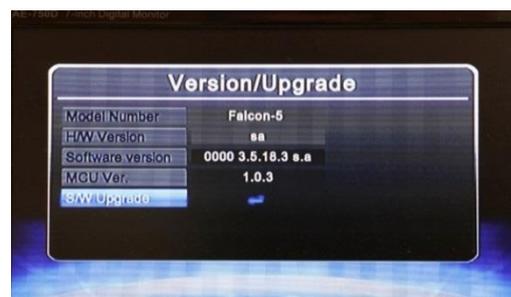
The previous TV channels will be deleted automatically if this function is executed.



## Version/Upgrade

To upgrade the software version

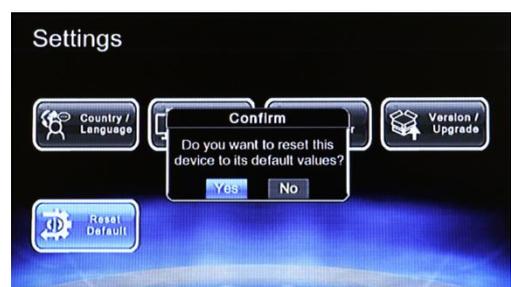
1. Insert the USB device, containing the software upgrade file, into the USB port.
2. After entering the Version/Upgrade menu, press the **[OK]** button to start the upgrade.



## Reset Default

To reset all settings to factory default

1. Press the **[▲]** and **[▼]** buttons to highlight the “Reset Default” option and press the **[OK]** button to enter.
2. Select **[YES]** to reset system settings to factory default.
3. Press the **[EXIT]** button or select **[NO]** to exit.



## 11. Using the Menu

### TV Menu

#### To set up the TV settings

Enter TV first, and then press the **[MENU]** button to make this menu appear. By navigating the different options, you can have the access to „channel list“, „audio settings“, „channel info“, „auto search“, „channel management“, „display setting“ and the „subtitle setting“.



### Channel List

#### To display channel information, to preview the program, and to access the Electronic Program Guide (EPG)

1. Select “Channel List” in the TV menu and press the **[OK]** button.
2. Press the **[▲]** and **[▼]** buttons to browse up/down the channel list to preview the program.
3. Press the **[EXIT]** and **[MENU]** button to exit.



*NOTE: you can also press the **[TV List]** button to enter “Channel List” while enjoy watching TV.*

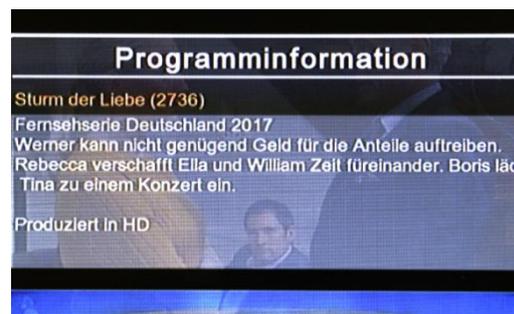
### Schedule

1. In the Channel List press the **[▶]** button to enter the schedule
2. Press the **[▲]** and **[▼]** buttons to browse up/down the date list to see the program schedule of the corresponding date.
3. Press the **[▶]** button to see the program schedule.
4. Press the **[▲]** and **[▼]** buttons to browse up/down the program schedule to see the previous/next program on the selected date.
5. While in program schedule list, press the **[OK]** button to see more information of the selected program.
6. Press the **[◀]** button to return back to the date list.
7. Press the **[EXIT]** and **[MENU]** button to return to the “Channel List”.



## Program Information

1. To get the information with its content of a special program, choose the desired program and select with the [OK] button.
2. Press the [EXIT] and [MENU] buttons to return to the "Schedule".



## Audio

To select either master or secondary language as well as the audio channel of current service

1. Browse the TV menu screen using the [▶] and [◀] buttons to highlight the "Audio" option. Press the [OK] button to enter the "Audio" menu.
2. Use the [▶] and [◀] buttons to select the stereo/left/right audio channel. Press the [OK] button to select the required setting.
3. Browse the available language using the [▲] and [▼] buttons. Press the [OK] button to select the language.
4. Press the [EXIT] and [MENU] key to exit.



## Channel Info

To show the information of the current service's system parameters and the signal information

1. Use the [▶] and [◀] buttons to highlight the channel information option.
2. Press the [OK] button to display the channel information.
3. Press the [EXIT] and [MENU] button to exit.

*NOTE: You can also press the [OK] button to enter "Channel Information" while enjoying TV.*



## Channel Sorting

To rearrange and to edit channels to the TV channel list, using skip, move, and delete functions

1. Select "Channel Sorting" in the TV Menu and press the [OK] button. The channel manager screen will appear as shown on the right picture.
2. Press the [▲]and[▼] buttons to browse up/down the channel list. Press the [OK] button to enter the editing menu for the chosen channel.
3. Press the [EXIT]and[MENU] button to exit the channel sorting menu.



## Skip a Channel

1. After entering the channel sorting menu, select the "SKIP" visual-button on screen by pressing the [▶]and[◀] buttons.
2. Press the [OK] button to activate or deactivate it.

*NOTE: this function **temporarily** removes the channel from the program list. The user can restore the channels by deactivating the function.*

## Channel Movement

1. After entering the channel sorting menu, select the "MOVE" visual-button on screen by pressing the [▶]and[◀] buttons.
2. Use the [▲]and[▼] buttons to move the channel up or down in the list.
3. Press the [OK] button to save the new listing.

## Channel Delete

1. After entering the channel sorting menu, select the "DELETE" visual-button on screen by using the [▶]and[◀] buttons.
2. Press the [OK] button to delete the channel.

*NOTE: this function will **permanently** delete the channel from the current program list. Users will only restore the previous channels back by performing the auto search again.*

## Display

To set up and to adjust the ratio, the image and the image signal

1. Press the [▲]and[▼] buttons to highlight the item you want to adjust.
2. Press the [OK] button and use the [▲]and[▼] to browse up and down the options.
3. Select one option by pressing the [OK] button or exit the setting by pressing the [EXIT]and[MENU] button.
4. After adjusting, press the [EXIT]and[MENU] button to exit the “Display” menu.



## TV Setting

To configure the subtitle, teletext, and antenna power setting

### Subtitle

To active or deactivate the subtitle function

1. Choose the „TV Setup” option in the TV menu screen using the [▶]and[◀] buttons to highlight the “Subtitle” option.
2. Press the [OK] button to enter the “Subtitle” menu.
3. Browse the available language using the [▲]and[▼] buttons.
4. Press the [OK] button to activate the subtitle language.
5. Press the [EXIT]and[MENU] key to exit



### Teletext

Using the teletext function

1. Use the [▶]and[◀] buttons and browser the TV menu to highlight the “Teletext” option. Press the [OK] button to enter “Teletext” menu.
2. Press the [▲] button to view the next page or the [▼] to view the previous teletext page.
3. Press the numerical key button to jump to the ^ specific teletext page.
4. Press the [MENU]and[EXIT] to leave.



## 12. Version/Upgrade

### To upgrade the software version

1. Insert the USB device, containing the software upgrade file, into the USB port.
2. After entering the Version/Upgrade menu, press the **[OK]** button to start the upgrade.



## 13. Trouble Shooting Q&A

Most of the troubleshooting issues can be easily resolved. The most common cases and their respective solutions are listed in the table below.

Problem	Possible Reason	Solution
No picture, no audio.	The power connector is not properly inserted into the unit.	Check the power wire connection.
	The unit is not switched on.	Press [POWER] button.
	Unit is in stand-by mode.	Press [POWER] button.
In DVB-T mode, the number of DVB-T channels is not as much as we expected.	The number of available channels is limited. The available channels can vary depending on the area.	Perform "Auto Search" or "Manual Search" to rescan all the channels.
	The signal quality of some TV channels is too low.	Please use active antennas instead of passive antennas for better reception quality.
	Some TV channels are not available.	Only the locally free broadcasted channels can be viewed. They can differ depending on the area.
In DVB-T mode, all of the channels show "no signal" or random mosaic tiles appear on the display.	Some TV channels signal quality is too low.	Please use active antennas instead of passive antennas for better reception quality.
	The antennas are not properly connected.	Please check the connection of the antennas.
	An amplified antenna doesn't receive 12V power	Connect the amp. Antenna <u>before</u> you connect power to the system. Take care for the menu's point "Ant.-Power"
	No DVB-T service is provided in the area.	Check your country DVB-T coverage map. It is not possible to watch digital TV/listen to digital radio in non-covered areas.
	Incorrect Regional Setting	Please check whether "Regional Setting" is correct, and perform "Auto Search" to rescan all of the channels.
The video is fine but there is no sound.	The audio volume is too low.	Press [▶] button to raise the volume.
	The system is installed near to a magnetic field	Change the place of installation and try again

## 14. Specifications

<b>RF Input</b>	
Antenna	Active antenna supported (F-Connector)
Frequency range	VHF (170-230 MHz) and UHF band (470-862 MHz)
RF input impedance	75 Ohm
Channel bandwidth	6/7/8 MHz for DVB-T; 1.7/5/6/7/8/10 MHz for DVB-T2
<b>TV System</b>	
Transmission standard	ETSI EN 302-755 v1.3.1 standard Support all DVB-T2 modes, including, Single and multiple-PLPs SISO and MISO transmission
Video/Audio decoder	Real time 1080P Full-HD Video Decoder - MPEG2 (ISO/IEC 13818-2) SD& HD - H.264 (MPEG-4 AVC, ISO/IEC 14496-10) SD & HD - H.265 HEVC
<b>S/W Feature</b>	
OSD Language	English, German, French, Portuguese, Spanish, Italian, Dutch, Finnish, Traditional Chinese, Thai, Indonesia
Features	DVB-T/T2 TV, Auto Channel Search, Multi-Language EPG, Teletext, Subtitle
TV/Radio Recording	Record TV programs on the USB device
<b>Media formats supported</b>	
Media port	USB
Audio format	MP3, WAV, ASF(option), AAC(option), WMA(option), RM(option)
Video format	H.265 HEVC, MPEG-I/II/IV, VOB, AVI, DivX, Xvid, MKV, TS, MOV, RMVB(option), FLV(option), WMV(option), ASF(option)
Subtitle format	SRT, SUB, SSA, ASS, SMI, PSB, TXT, IDX
Recorded file format	TSV (TV recording)
<b>Interface</b>	
USB port	Support the USB 2.0 host (for playback, TV recording, Updates)
Power/IR port	12-24V DC-In, supported through IR extension dongle cable
AV out	1 CVBS video out (optional amplification), 1 Audio (L/R) out
<b>Power</b>	
Input voltage	9V – 16V
Power consumption	6 Watt, max
<b>Dimension and Weight</b>	
Dimensions	136 X 95 X 25 mm
Weight	362 g

## 15. Technical support

Please note that direct technical support is only available for products purchased directly from NavLinkz GmbH. For products bought from other sources, contact your vendor for technical support.

**NavLinkz GmbH**  
***distribution/tech dealer-support***

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