

dvbLiNK DVB-T tuner



Dual DVB-T tuner

Product features

- Dual DVB-T tuner
- DVB-T MPEG2 and MPEG4 compatible (HD)
- AFS* - auto frequency switching
- USB AV-player port
- USB-devices up to 2TB (FAT32 and NTFS), supports Audio, Video and Photo files
- Support of all common Audio & Video formats (e.g MKV, MOV, MPEG-1/2/4, H.264)
- Last position memory (for Audio and Video playback)
- IR-remote control

*AFS - Auto Frequency Switching is a intelligent function which allow to use always the strongest signal of an selected service by scanning all other frequencies the selected service is available. All same services are merged to only one visible station. All available frequencies are handled by the system in an not visible data base.

Remote control operations

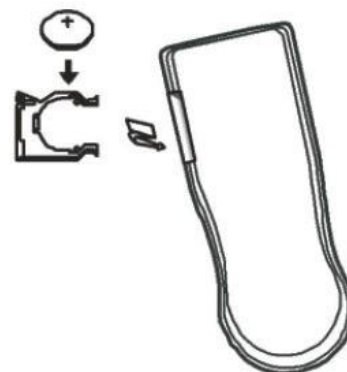
	Button	Function
1	SOURCE	No function
2	POWER	Select power-on or stand-by
3	CH ▲	Select channel up or move the cursor up
4	MENU	Enter the setup menu
5	OK	Select the highlighted item
6	VOL ◀	Select volume down or move the cursor left
7	CH ▼	Select channel down or move the cursor down
8	EXIT	Exit the current setup
9	1, 2, 3...,0	
10	RECALL	Return to the last selected channel
11	GREEN BUTTON	Hot key to enter Teletext pages in Teletext mode
12	RED BUTTON	Subtitle key in normal operation mode or the hot key to enter Teletext pages in Teletext mode
13	MUTE	Mute control
14	DTV/RADIO	Select digital TV or digital radio
15	PIC	No function
16	EPG	Electronic Program Guide
17	VOL ▶	Select volume up or move the cursor right
18	PREVIEW	Enter preview mode in DVB-T TV
19	PLAY/PAUSE	Select play or pause
20	AUDIO	Select second language and stereo audio
21	INFO	Display digital TV system information
22	AUTO SCAN	To scan channels automatically
23	MANUAL	To manually select channels
24	ENTER	To enter the selected channel number
25	TTX	To display teletext content
26	YELLOW BUTTON	Select page up in the EPG mode or the hot key to browse teletext pages in Teletext mode
27	BLUE BUTTON	Select page down in the EPG mode or the hot key to browse Teletext pages in Teletext mode



Remote control battery installation

Before attempting to operate your remote control, install the battery 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. Slide battery in obeying the polarity.



Connection

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

Antenna positioning

When working with DVB-T products, how and where to position antennas, to achieve the best reception performance possible is an often 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. Also the highest reception performance usually requests a higher visibility of the antennas which the vehicle owners usually reject.

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 final installation!

Glass-mount antennas

1. Make sure the windows which 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 vertical broadcasting, therefore mount vertical. If broadcasting is mixed or horizontal try also horizontal positions.
4. Performance is better if installed in a low position of the window.
5. Performance is better if installed with some distance to the window frame.

Alternative antenna (positions)

1. External roof-mount antenna – best reception
2. Flexible waterproof antenna inside side mirrors – very good reception, but must be first tested because metallic paint and mirror parts may disturb reception.
3. Waterproof antenna in bumper – totally invisible, but reception usually lower because of the low position. Might be hard to position antennas vertically.

Main Menu

In the menu mode, you can highlight the service type, program list, preview, audio channel, program editing, program info, automatic search, manual search, and system setting to enable the related function. You can use [CH+], [CH-], [VOL+], and [VOL-] buttons to highlight the item and press [OK] button to set the setting.



DVB-T TV Mode

To enter DVB-T TV mode.



DVB-T Radio Mode

To listen to DVB-T radio broadcasting.



Movie Playback Mode

To enter movie playback mode and watch movie files.



Music Playback Mode

To enter audio playback mode and listen to music.



Photo Viewing Mode

To enter photo viewing mode and watch pictures.



System Settings

To configure the device settings.

*Note: Press the [HOME] key to go back to the home screen anytime.
Press the [SOURCE] key to switch AV source anytime.*

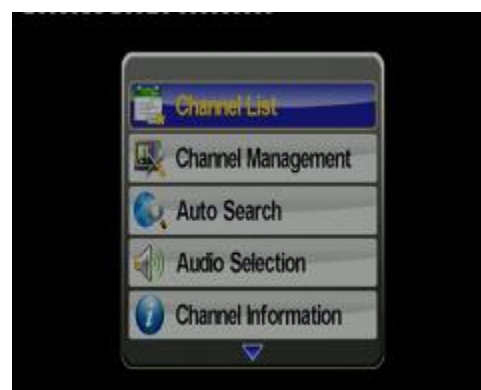
DVB-T TV

1. Choose the menu item "DVB-T TV" in the main menu.
2. Press [OK] to enter TV-mode.
3. Press [CH+] and [CH-] to switch.
4. Press [EXIT] to get back to the last menu item.



DVB-T TV Menu

After entering the DVB-T TV service, press [MENU] button to make the menu appear. By navigating through different options, you can have access to channel list, channel management, automatic channel search function, DVB-T audio settings, channel info, aspect ratio, subtitle function, teletext, AFS setting, and CONAX CA information.



Channel list



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

Channel management



To rearrange and to edit the TV channel list by skip, move, and delete functions.

Auto search



To search the available channels automatically.

Audio settings



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

Channel information



Provide the information of current service's system parameters and signal information

Aspect ratio



To adjust image aspect ratio into full-screen, letter-box, and none

Subtitle



To activate or deactivate the subtitle function

Teletext



To enter the teletext menu

AFS settings*



To set up AFS mode*

CONAX CA



To access CONAX CA card menu. In this menu, you can check subscription status, check event status, check token status, change CA PIN, change maturity rating, get Conax CA information and get CA message.

* **AFS** - Auto Frequency Switching is a smart feature that allows the user to watch a channel when moving between 2 cities/areas where the channel is broadcasted in different frequencies. For example, channel "ABC" in city A is broadcasted on frequency 474MHz. In city B, this channel "ABC" is broadcasted on frequency 490MHz. After having scanned in each region once, when moving from city A to city B or vice versa, user can keep watching the channel "ABC" without performing auto search to find the new frequency in city B. When AFS is activated - no matter whether manual or auto mode – while scanning, the tuner recognizes equals channel names. Each channel is only saved on one program place. All frequencies a channel has been found on are saved in an invisible database in the same order as them have been found.



When changing program an info bar is displayed for a few seconds. Besides the program place number, the channel name and antenna strength, the bar also shows the number of available frequencies of the current station (here 4) and the number of the current frequency (here 1). While the info is displayed, the [VOL▶] or [VOL◀] buttons can be used to manually switch to the next or previous available frequency. At any time, the FR◀◀ and FF▶▶ buttons can be used for the same function.

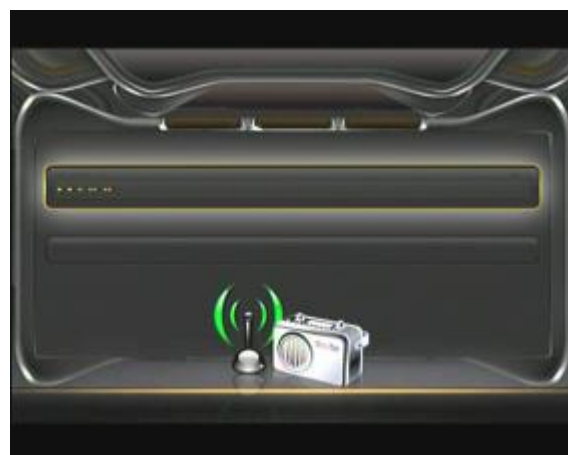
There are three AFS modes available:

1. **OFF:** AFS function deactivated
2. **Manual:** the user can manually switch between available frequencies of the current channel and manually perform new scans.
3. **Auto:** when signal is weak for a preset number of seconds, the tuner seeks among the frequencies of the current channel which are available from the database. If none of the available frequencies shows a signal, the tuner automatically performs a new scan.

Note: The information of the AFS database is erased when setting the tuner to factory defaults.

DVB-T Radio

1. Press [CH▲]/[CH▼] buttons to select the Ratio item and then press [OK] button to enter the radio mode.
2. Press [CH▲]/[CH▼] buttons to select your preferred radio channel.
3. The radio service will start instantly.



Movie

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

1. After selecting movie playback mode on the home screen, file browser screen will appear. Press [OK] button to select the root folder.
2. The available video files will appear on screen. Use [CH▲] and [CH▼] buttons to scroll up and down through files, and then select the desired file by pressing [OK] button. The video file will instantly start playing.

NOTE: Users can only choose video files under this mode. System will not support music or photo files under this mode.

3. Press [EXIT] button to return.



NOTE:

1. Press the FR / FF button to increase or decrease the playing speed.
2. Press the [PLAY/PAUSE] button to pause or resume music playing.
3. Press [RED] button to delete highlighted file/folder.

Music

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

1. After selecting music playback mode on the home screen, file browser screen will appear. Press [OK] button to select the root folder.



2. The available audio files will appear on screen. Use [CH▲] and [CH▼] buttons to scroll up and down through files, and then select the desired file by pressing the [OK] button. The audio file will instantly start playing.

NOTE: users can only choose music files under this mode. Video or photo files are not supported under this mode

3. Press [EXIT] button to return.



NOTE:

1. Press the **FR** (rewind) / **FF** (fast forward) button to increase or decrease the playing speed
2. Press the **[PLAY/PAUSE]** button to pause or resume music playing.
3. Press **[RED ●]** button to delete highlighted file/folder.

Foto

The section below will explain how to view a picture file stored on USB device.

1. After selecting photo viewing mode on the home screen, file browser screen will appear. Press [OK] button to select the root folder.



2. Available picture and folders will appear on screen. Use [CH▲]/[CH▼]/[VOL▶]/[VOL◀] buttons to browse the folder, and then select the desired one by pressing [OK] button.

Note: users can only choose photo files under this mode. If users choose music or video files, the system will not support.



3. A picture preview will appear. Press [CH▲]/[CH▼]/[VOL▶]/[VOL◀] to select a picture, and press [OK] button to display the picture in full screen mode.

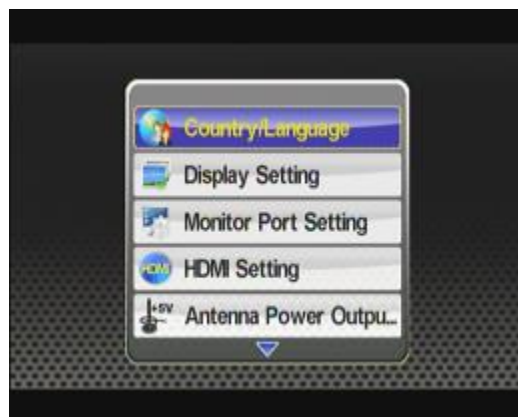


4. Press [EXIT] button to return.

NOTE: Press the [PLAY/PAUSE]  button to pause or resume photo slideshow.

System settings

This is the menu screen of system settings. Users can adjust the country/language setting, picture quality, monitor port setting, HDMI setting, antenna power output, reset default, and proceed to a software upgrade. Use [CH▲] and [CH▼] buttons to highlight the desired item and press [OK] button to select one.



Country/language



To set up the OSD language and DVB-T regional settings

Display setting



To adjust picture brightness and colour setting (hue, contrast, and saturation)

Monitor-port setting



To set up the video output format through monitor port

HDMI setting



To set up the image type of HDMI output

Antenna power output (+5V)



To provide/stop providing antenna phantom power

Version upgrade



To upgrade the user interface software version via USB*

Reset default




To reset all settings to factory default

* Select "software upgrade" to upgrade the software, select the software on the USB-medium and confirm with [OK] button. The upgrade process should not be interrupted in order to prevent damage. Reset the tuner to factory settings after the software upgrade.

Record function

NOTE: HR-V supports both DVB-T TV and DVB-T Radio recording.

1. During TV or Radio mode, press [REC] to start recording TV/Radio programs. When the unit starts to record,  icon will appear on the upper left screen & the timer menu (disappear in 10 sec without control) will appear on the lower left screen simultaneously.

NOTE:

- a. Please ensure that a USB Storage device is connected to the unit before recording.
 - b. To ensure successful recording on storage device with NTFS system, please plug the storage in Windows operated computer and perform "Safely Remove Hardware" application before using it with HR-V
2. Recorded TV programs can be played back in Movie mode. And the recorded Radio programs can be played back in Music mode.

Important notes:

- i. A recorded program will be stored in a default folder named "Recorded_Program". The file types will be ".TSV" file for TV program and ".TSA" file for Radio.
- ii. The file is named as (Channel Name) + (Recorded Date Recorded Time)
- iii. Maximum file size of FAT/FAT32 is 4 GB, if the file exceeds this size, the system will cut the recorded file into 2 parts.
- iv. 1 GB storage can record TV program for approximately up to 45 minutes.
- v. Storage files system can support FAT/FAT32/NTFS format.
- vi. Generally all USB 2.0 flash drive can be used as recorded file storage. However, there are cases when the USB flash drive can't store recorded programs from DVB-T receiver unit. It's strongly suggested to format the USB storage device by PC or laptop before it's inserted into the DVB-T receiver unit.
- vii. **WARNING!** Please do not edit the "*.PLT" & "RECORD.TMP" files. Modifying/deleting this file will cause error on recorded file.

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. If the problem persists, please contact the after sales service.

Problem	Possible Reason	Solution
No picture, no audio.	The power cord 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 due to the local broadcasting environment. 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.
	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.
In DVB-T mode, no video or audio and "Scrambled" message appears on the screen	No Smart card is inserted	"Scrambled" message will appears when the TV/Radio signal received is paid-TV. To watch these channels, please insert a valid smart card into CA slot on front panel.
	Smart card is out of date	Please check your subscription date. If your subscription date is already out-of-date, please contact your service provider to extend your subscription.
The video is fine but there is no sound.	The audio volume is too low.	Press [VOL▶] button to raise the volume.
	The audio is muted.	Press [MUTE] button to disable the mute function.

The remote control does not work	No power.	Check the remote control battery. <i>NOTE: the new remote control might be supplied with a small plastic insulator to avoid discharge of battery power. Check that the plastic insulator has been removed.</i>
	No "line-of-sight" between unit and controller	Ensure there are no obstacle between the controller and the unit.

Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<1mA
Operation power drain	<1200mA
Power consumption	<16,5W
Temperature range	-30°C to +80°C
Weight	333g
Measurements (box only) B x H x T	140 x 30 x 105 mm

Technical Support

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