ELIUM

Operating Instructions

19" DVB SD/HD IRD

Integrated Receiver Decoder

We thank you for your confidence in our product and congratulate you to the purchase of your Digital Receiver of ELIUM GmbH.

As this product is provided with an immense array of features, we recommend you to review the contents of this manual before proceeding.

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Information

1.1 Accessories

- Digital SD/HD IRD Integrated Receiver Decoder

- Remote Control / Batteries (optional)

- Operating Instructions (Service CD)

1.2 Safety Regulations

Pay attention to the following before using this unit. To be sure read these instructions carefully and use the set properly. Be sure to keep this manual for future reference, should any question or problem arise.

Power Cord
Handle the power cord carefully. Hold the plug when unplugging the cord. Do not use a damaged power cord. Do not plug the power cord until all connections have been completed.

Input Voltage
Use only at voltage of 100 - 240V.

Ventilation
The temperature inside the unit is effectual deduced. Please do not cover the ventilation slots to avoid temperature problems and serious failures.
The unit needs a stable stand at all time.

Opening the unit
Do not open, try to disassemble or modify the unit in any way. There are no user serviceable parts inside. Refer servicing to qualified service personnel only. No liability for electric shock to persons or accident damage of user when cover of unit was removed or opened.

! ! ! Please refer servicing to qualified staff ! ! !

Insolation
Do not install the unit near any heat sources. Avoid direct insolation. Keep care that the unit is not used in too low temperature.
The ideal temperature is between 10°C – 45°C.

Moisture
Keep the unit free from **moisture, water and dust.** The unit should not be used in moist rooms, wet rooms or near a bath. The ideal humidity is between 10% – 70%.

Earthing
The parabol satellite antenna must be earthed. Please observe the relevant regulations.

Information

1.3 Remote Control

The remote control enables the interaction with the HCR receiver. Therefore it is very important to know about the main functionality.

1 - On / Off (StandBy)
2 - Channel selection or data input
3 - Switch between TV and radio mode
4 - Not active
5 - RCL return to last channel
6 - Mute
7 - Up and Down Scroll in channel list or menu
8 - Plus/Minus volume adjustment
    or changes in menu
9 - Exit (return to last menu)
10 - OK confirm or select
11 - Main menu or save
12 - Not active
13 - MovieNET menu
14 - Search a channel by name in channel list
15 - Network playback menu
16 - Rewind
17 - Fast forward
18 - Play / Pause
19 - Preview video
20 - Next Video
21 - Start / Stop recording
22 - Program information
23 - Teletext
24 - EPG
25 - Timer menu
26 - Not active
27 - Multifeed and multilanguage
28 - Search / Freeze picture
29 - Technical information
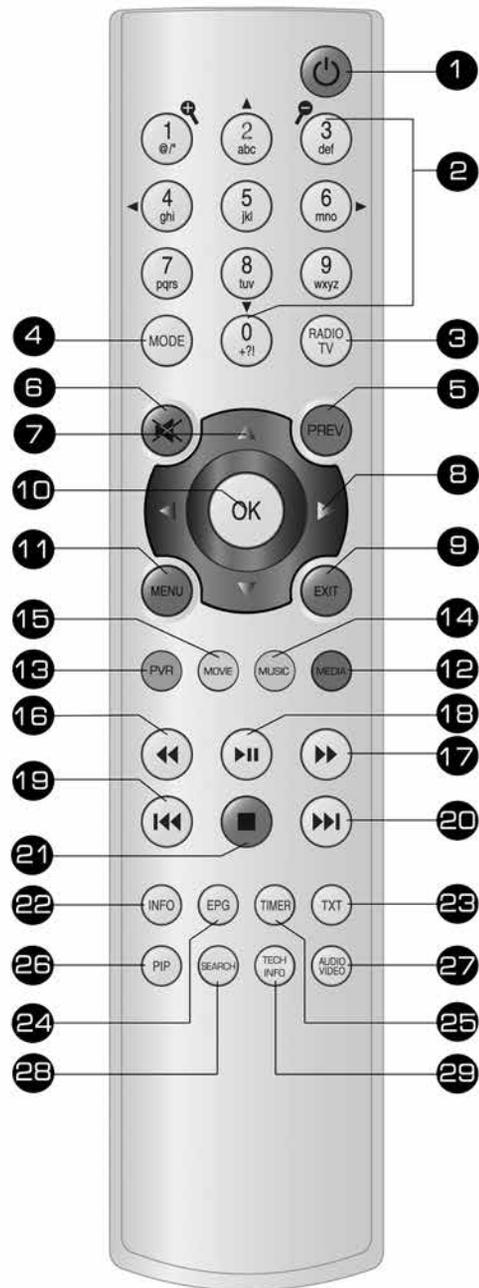
Installation

2.1 OSD Settings

After switching on the SD/HD IRD with the StandBy button (1) of the remote control you should see a welcome screen on the TV set. Now you can start setting up the OSD (On Screen Display) settings.

How to set up the OSD:

- To move between the different options press the Up or Down button (7).

- To select a setting press the OK button (10).

- To change the value press the left or right button (8).

- Values you can set up:

  › **OSD Language:** You can select between three OSD languages: English, German and Russian.

  › **OSD Transparency:** OSD transparency can be adjusted.

  › **OSD Colours:** Adjust colours in OSD menu.

  › **OSD Background:** Upload any picture to set it as background image of the OSD.

  › **OSD Backlight:** Backlight of the front display can be adjusted.

  › **OSD Contrast:** Contrast of the front display can be adjusted.

  › **OSD Timeout:** Select seconds the OSD should apear.

  › **Program Logo:** On or off of program logos (Program logos will be downloaded)

  › **Ext. Program info:** Choose if a permanent OSD overlay should be shown including technical information like signalpower, signalquality, audio and video PID.

- To save the adjustment of the OSD installation press the Exit button (9).

- To leave the OSD installation setup press the Exit button (9) again.

2.2 Video Settings

After setting the OSD you may set up the video settings.

How to set up the video functions:

- To move between the different options press the up or down button (7).

- To select a setting press the OK button (10).

- To change the value press the left or right button (8).

- Values you can set up:

  › **Digital TV:** Here you can select between display, picture format, mode, brightness, colour saturation, sharpness and RGB/Yuv display.
  › **Analog TV:** You can select between display, picture format, mode, brightness, contrast, colour saturation, colour shade, sharpness and the amplitude.
  › **SDI Video:** You can select between the output format HD and SD and switch 656 on or off (only if SDI is available).

- To save the adjustment of the video settings press the Exit button (9).

- To leave the video settings press the Exit button (9) again.

2.3 Audio Settings

After setting the video settings you may set up the audio settings.

How to set up the audio configuration:

- To move between the different options press the up or down button (7).

- To select a setting press the OK button (10).

- To change the value press the left or right button (8).

- Values you can set up:
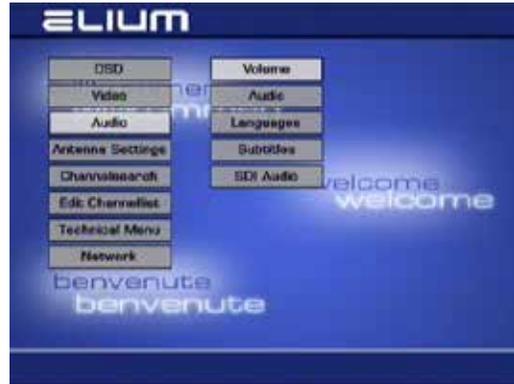
- **Volume:**
    - › **Volume:**   Change this value to set the Volume.

    - › **Volume Control:**   Here you can select whether the volume should be controlled by remote control or the fix volume value setup above should be used.

    - › **Output Mode:**   Here you can select between mono, mono left, mono right, mono mix, stereo swap and stereo output.

- **Audio:**
    - › **Prefer AC3:**   Here you can activate the AC3 format. (Warning, only with AC3 Decoder working.)

    - › **HDMI source:**   Switch between audio 1 and audio 2.

- **Languages:**
    - › **1st - 3rd Language:** Here you can select the Languages fot programs.

- **Subtitles:**
    - › **1st - 3rd Language:** Here you can select the Languages for subtitles.

- **SDI Audio:**   Here you can switch between the audio tracks and adjust the volume of the SDI Audio (only if SDI available).

SDI Audio:
There are eight audio tracks.
These allow to switch between
Audio 1 and Audio 2.
Audio 1: L-R Analog
Audio 2: Digital (AES)

Installation

2.3 Audio Settings

HDMI AUDIO

In HDMI you can switch between Audio 1 (Analog L-R) and Audio 2 (Digital / AC3).

- To save the adjustment of the sound settings press the exit button (9).
- To leave the sound settings press the exit button (9) again.

2.4 Antenna Setting DVB-S

Setting up the antenna. Depending of the receiving part of your SD / HD IRD vary the settings of the channel search.

The SD/HD IRD is preset for astra satellite. But you can set up the antenna installation as well as the channel search for other satellites.

- To move between the different options press the up or down button (7).

- Confirm a setting with the OK button (10).

- To select a setting press the left or right button (8).

If you use only one LNB you have to change the option LNB Connection(DiSEqC) to "direct".
Otherwise if you use several LNB or several antenna connected to a multiswitch you have to assign an own DiSEqC connection to each seperate LNB or antenna.

For older devices without DiSEqC there is a 22kHz switch.

For the correct setup you have to adjust the following parameter.

- **Satellit:** Select the satellite you want to receive.

- **DiSEqC Input:** Select the LNB Number for example: antenna 1 correspond to LNB number 1, antenna 2 correspond to LNB number 2 etc.

- **DiSEqC:** Select the DiSEqC for example DiSEqC A correspond to sat system A, DiSEqC correspond to sat system B etc.

- **Relay:** Select the to use relaylevel (for example DiSEqC 1.1)

- Press the exit button (9) to save the parameter.

- Leave the menu by pressing the exit button (9) again.

Example: Hotbird - LNB number 2 - LNB connection DiSEqC B and Astra - LNB number 1 - LNB connection DiSEqC A. You will see the signal quality shown at the OSD after a few seconds if set up is correctly.

2.5 Channel search

How to do a channel search. Depending on the reception option of the unit, you have different options shown for the channel search.

In this menu the signal strength and quality is indicated. To change the frequency press the left or right button (8).

There are two options and additional option for the channel search:

- **Automatic:** All available frequencies are searched and listed using the standard parameters.

- **Manual:** Searching for all channels of a particular frequency.

- **DVB - C/ T:** You can set the Cable/Terrestrial Tuner to use a Cable or Terrestrial Source.

- **Search options:**

  >**Scan for:** Here you can separating reach TV from radio.

  >**Use NIT:** Comprehend name and type from the transmission system (Astra, Satellit). Secondary that comprehend technical parameters like frequency and fault protection to.

  Allows to find more programs with the information of some channel.

  >**Scan/Use Pids:** Audio and video will dedicated to relative programs automatically.

  >**Just: Free Channels:** Only search of free channels.

The following options have to be entered:
  › **Source:** Only for DVB-S
  › **Frequency:** DVB-S, DVB-C and DVB-T
  › **Modulation:** Only for DVB-C
  › **Polarisation:** Only for DVB-S
  › **Symbol Rate:** Only for DVB-S

After finishing the search you have to save the found channels by pressing the Exit button (9).
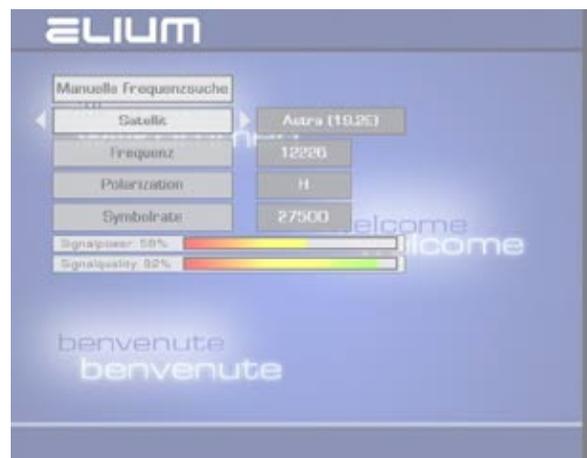
Channels

2.6 Edit Channels

After the channel search you can edit the found channels. You can select to edit TV channels or Radio channels. Also you can edit the volume of each channel separately. The description is for both TV and Radio list.

- **Menu functions:**

    MP3: Search for Channel

    OK: Select to delete

    TXT: Select all scrambled channels

    EPG: invert selection

    TV/R: move channel to Radio/TV list

    0: move channel to top position

- **Volume:**

    Is is possible to preset the volume for each program and channel independently.

- **Delete selected channels:**

    To select the channels you want to delete, move with the up and down button (7) and mark each channel by pressing the OK button (10). The selected channels are shown grey coloured. To delete the selected channels you have to press the exit button (9).

- **Move a channel:**

    Select a channel to move it (marked in white). Now just enter the number, using the numeric buttons (2), you want the channel to be and press the OK button (10).

    The position „0" is the first position in the list. If you want to move a specific channel you can search for it by using the MP3/JPEG button (14).

- **Delete all channels:**

    To delete all channels mark them by pressing the EPG button (24) or the info button (22). You can also unmark all channels using these buttons. To save this set up you have to press the Exit button (9).

- **Move channels in the Radio Channel list:**

    The SD/HD IRD searches for channels and stores them in two lists: TV Channel and Radio Channel list. Some radio channels are broadcasted with wrong information by the provider so that they are stored in the TV Channel list. To move a channel which is a radio channel to the radio channel list just press the TV/R Button (3).

Technical

3.1 Technical Menu

The Technical Menu shows you different information. Here you can set up technical information regarding the unit such as date and time.

There are different options shown in this menu:

- **Box Info:** Shows you technical information of the unit like the current firmware.

- **Stream Info:** Shows you a program information of the current and next event. You can also get this information by pressing the info button (22).

- **Control:** Setup the IR addresses and the RS232 baud rate.

- **DVB Services:** Set the videotext and the EPG.

- **Fan Settings:** Set the speed of cooler by changing the minimum and maximum temperature of the unit. **Do not turn the cooler off as this may result in serious damage to the unit. Please pay attention of ventilation lance, because they must ever be free.**

- **eSATA:** Manage the hard drives (if available).

- **Time Zome:** Here you can change the time zone.

- **Access Module:** Here you can get information and set up the used common interface module (if available).

- **Data Backup:** Here you can save your settings to a USB stick or load a recovery point. **The file with the „+.tar" extension contains the saved settings of the decoder.**

- **Restart:** Here you can reset your device to default settings or simply restart it.

Technical

3.2 IP Settings

Available settings:

Optional you can select between one or two Ethernet
ports. (Regulated by your SD/HD IRD)

Ethernet 1 = Streaming and control
Ethernet 2 = Control

**The IP addresses of the Ethernet 1 and Ethernet 2
have to be in different IP areas.**

▪ **DHCP:** Automatic IP Address

▪ **RC Port:** Select Port. (Default Port 26)
  **Attention! This port does not be used by default ser-
  vices such as:
  Port 80: HTTP
  Port 23: Telnet u.s.w.
  You should check it on the internet first.**

▪ **IP address:** Set up the IP Address of the receiver.

▪ **Netmask:** Set up the Network Netmask.

▪ **Broadcast:** Broadcast Address.

▪ **Default Gateway:** Set up the Network Gateway.

▪ **Name Server:** Server IP.

All Settings are entered by the numeric field of the remote control (2)

CAUTION: You have to turn Off/On the unit to have the setup in use.

3.3 Menu via Display

It is possible to change the settings via the front panel. By pressing the „M" button the following menu structure appears in the display:

OSD

OSD Language	Choose the OSD Language
OSD Transparency	Choose the transparency on menu
OSD Colours	Set the OSD colours
OSD Background	Background image, change boot and shutdown image
LCD Brighness	Setup the display backlight on device
LCD Contrast	Setup the display contrast on device
OSD Timeout	Time to show the OSD
Ext. Proginfo	Additional information such as signal quality, signal strength

Video Settings

Digital TV	Setup the settings like picture format, contrast, sharpness,..
Analog TV	Setup the settings like play format, contrrast, sharpness,…
HDMI	Switch HDCP on or off
SDI Mode	Choose between HD und SD format.

Audio Settings

Volume	Change the volume
Audio	Activation of AC3
Languages	Choose the Language for programs
Subtitle	Choose the Language for subtitle
SDI Audio	Audio tracks settings and SDI audio rules

Antenna Settings   Choose satellite

Channelsearch

Automatic Search	Automitically search of programs
Manual Search	Manual search of programs
Search Options	Search options

3.3 Menu via Display

Technical Menu

Box Info	Readout software, hardware version and more …
Stream Info	Readout transponder, picture format, …
Control	Startup functions
Fan Settings	Fan settings
eSATA	Settings for the hard drive / format hard drive
Time Zone	Set time zone
Access Module	CI Module info
Data Backup	Save and load of settings
Restart	Restart or reset your device

You can also enter the main menu by pressing the „OK" and „M" button at the same time

3.4 External Boxeditor / Telefonsupport

External Channellisteditor - BOXEDIT

▪ Connect your PC and the receiver via a RS232 cable.

▪ Start the Boxedit.

Following functions are available:

▪ Load from Box: Loads TV and Radio channel list to the PC and displays it.

▪ Load from File: Loads a existing channel list and displays it.

▪ Save to Box: Saves the actual channel list to the Receiver.

▪ Save to File: Saves the actual channel list at a choosable place on the PC.

(The file with the „+.bed" extension contains the TV and radio list)

Phone support

If you need any phone support, please make sure you have the following information from the Info Hardware/Software menu at hand:

App. Ver. and Board Ver.

3.5 eSATA

Important: The connected hard drive have to be formatted to the right format by the device:

Menu/ Technical Menu/ eSATA/ Interface 1/ Format HDD
**   Interface 2/ Format HDD**
Make sure the cables are correct connected.

(eSATA 1 = Bottom interface on device)
(eSATA 2 = Top interface on device)

In the eSATA menu you can change the sleep time and the running noise of the hard drive.

In preferred data storage you decide where a recording is saved, the hard drive or network (If you are connected to a network). If the setting is "ON" the recording is saved on the hard drive.

In the eSata menu you can adjust a time out for the hard drive. This turns the hard drive off if it is not used.

In the submenu "running speed" you adjust the speed of the hard drive, which changes the running noise.

In "Management" you can switch between the connected hard drives and check or format them.

With the DVR button "13" you get into the MovieNET menu:

This menu allows to play the movies from a connected hard drive.

- With the stop button "21" you can start or stop a record of a selected channel or program.

- With the fast forward "16" and the rewind "17" button you can fast forward and rewind.

- With the play / pause button "18" you can start and stop a recording.

- With the video forward and back buttons "19" and "20" you can switch between the videos and rewind to beginning or fast forward to the end.
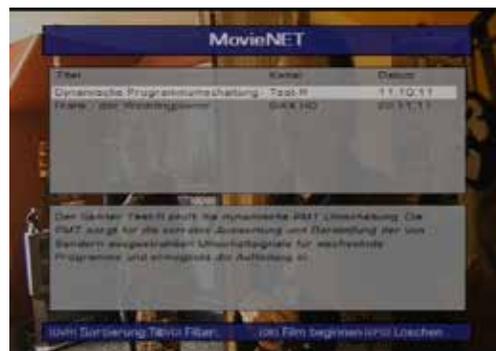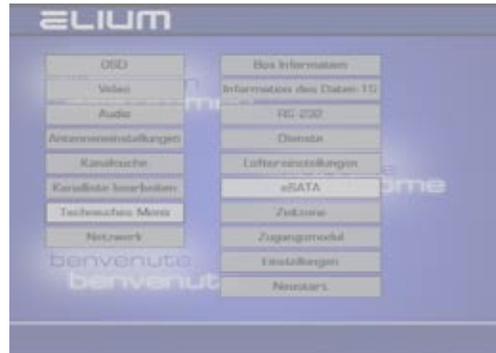
3.5 eSata

With the PVR button „15" you get into the movie menu:

The movieNET menu allow to play movies from the hard drive.

- With the "stop" button „21" you start a selected movie.

- With the buttons rewind „16" fast forward „17" you can rewind or fast forward a movie.

- With the Play / Pause button „18" you can start or stop the movie.

- With the "next" and "previous" buttons „19" and „20", you can switch between movies and rewind to beginning or fast forward to the end.

With the PVR button „14" you get into the music menu:

The MP3 mode allows to play MP3 from a hard drive.

- With the Play / Pause button „18", you can start and stop the MP3 title.

- With the "next" and "previous" buttons „19" and „20", you can switch between the MP3 titles.

With the PVR button „12" you get into the picture menu:

The picture mode allows to look at pictures from a hard drive.

- With the Play / Pause button „18", you can show the selected picture.

- With the "next" and "previous" buttons „19" and „20", you can switch between the pictures.

Network setup:

To access the hard drive you have to setup the access first.

Technical

3.6 Additional Function

In the following some diverse function of the unit are listed which you can select using the Remote Control.

• **TV - Radio button (3):** Using this button you can switch between TV Channels and Radio Channels.

• **RCL button (5):** Using this button you can switch to the last used channel. This function makes it easy to switch between two channels.

• **Info button (22):** Using this button you can get information regarding the current and next event of a channel with detailed event information.

• **EPG button (24):** Using this button you can start the Eletronic Programm Guide (EPG). After a few seconds you will get a program overview, of the available channels on the current transponder, up to one week.

To move inside the EPG you have to press the left/right button (8) and the up and down button (7).

If you want to see a detailed description of the program you have to select press the Info button (22). If you want to go back to EPG overview without switching to the selected channel press the Exit button (9).

To switch to the selected channel you have to press the OK button (10).

To leave the EPG you have to press the Exit button (9).

• **Multifeed and Multilanguage button (27):** Using this button you can select different camera feeds or languages if broadcasted by the provider.

Frontpanel:

Connections:
USB Port:	Device Update
RS-232:	Control the device

Tasten:
SERV:	Remote control off / on
Links:	Navigate left or reduce volume
Rechts:	Navigate right or increase volume
Oben:	Navigate up or switch program up
Unter:	Navigate down or switch program down
Mitte:	Confirm or call program list
Menu:	Menu
Exit:	Exit

3.7 Network Access

Connect the device with your computer or network. Make sure the device communicates with your computer.

To play videos, audios, images or recordings from your computer you have to create a folder on computer and share it to your network (for example "media" in image 1). To detect the videos, audios, images or recordings you have to create folder for them.

- for videos: movies
- for audios: audio
- for images: picture
- for recordings: recordings

HDR / IRD-HD Settings:

The settings you find in:
Menu -> Network -> NFS   -> NFS Drive 1
                          -> NFS Drive 2
                          -> NFS Drive 3
                          -> NFS Drive 4
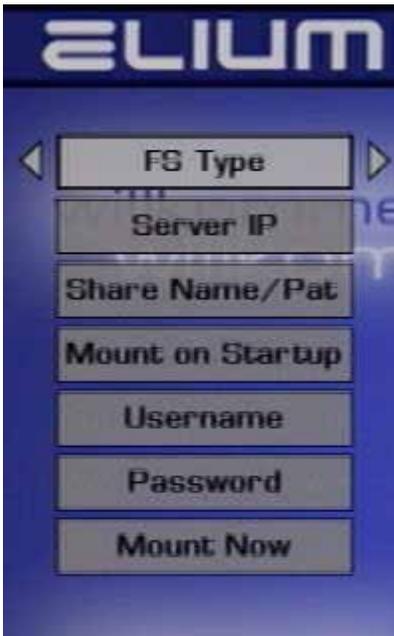
Image 1
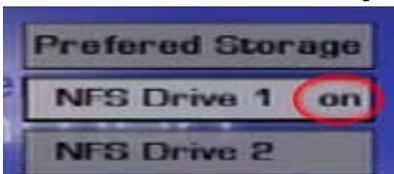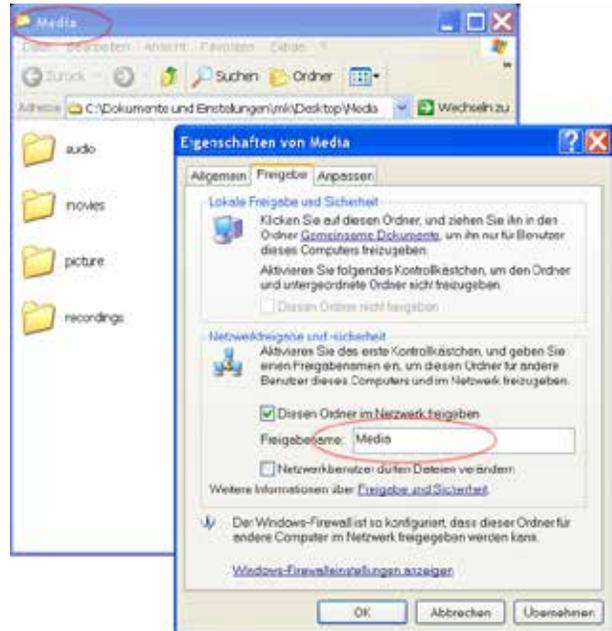
Image 2

Image 3

FS Type: Format setting, CIFS for Windows and NFS for Linux.

Server IP: The IP-Address of your computer

Share Name/
Pat: Name of the shared folder

Mount on
Startup: Create folders on startup *

Username: guest

Password: blank, when login as „guest"

Mount Now: Create folders now*

(Image 2)

* If the folder is not write protected, the device creates the folders movies, audio, picture and recording.

If all settings are correct, then appears an "on" behind the NFS drive (image 3).
Open file playback menu with the DVD / MOVIE button on the remote control or with the command <RMC B> via ETH/RS232 (Protocol).

3.8 Live Streaming => Network

(Streaming Server)

Connect the device with your computer or network. Make sure the device communicates with your computer.

Important:
The IP addresses have to be in the same network address.
For live streaming the HDR / IRD-HD Decoder have to be connected with a network cable.

HDR / IRD-HD Decoder settings for broadcast:
Then activate the Stream to Network option in the menu of HDR or IRD-HD Decoder (Image 1 and 2).

Image 1

Image 2

In mode you can switch between a single program stream or a full transponder stream. In protocol you can switch between RTP, UDP and HTTP protocol.

Broadcast: Stream is sent to all subscriber in network.
Multicast: Stream is sent to a selected subscriber in network.

For the multicast function you have to enable multicast in your HDR / IDR-HD Decoder (Image 3 and Image 4).
Multicast address area: 224.0.0.0 - 239.255.255.255

Image 3

Image 4

3.8 Live Streaming => Network

The default port for RTP and UDP protocol is 1234, this port have to be the same as in the VLC Player. The HTTP protocol uses the 31339 port. Please take care the ports are not in use.

VLC Player Einstellungen:
Open VLC Player. In the menu bar, media -----> open network stream, then find the network-protocol-input (Image 6).

Image 5
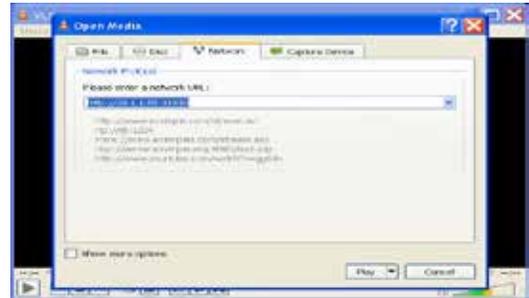
Image 6

For Broadcast:
As network address for a UDP stream enter „udp://@:1234" and confirm with playback.
for a RTP stream enter „rtp://@:1234" and confirm with playback.
For Multicast:
As network address for a UDP Stream enter for example „udp://@239.035.010.055:1234" and confirm
with playback.
for a RTP Stream enter for example „rtp://@239.035.010.055:1234" and confirm with playback.

Multicast address area: 224.0.0.0 - 239.255.255.255

The IP address have to be taken by your device.

For a HTTP protocol variant 1:
As network address for a HTTP stream enter „http://10.1.1.65:31339" and confirm with playback.
Variant 1: Stream current program at the PS protocol or the transponder of the current program at the PS protocol.

For a HTTP protocol variant 2:
As network address for a HTTP stream enter:
„http://10.1.1.65:31339/list?mode=tv" for TV programs ,
„http://10.1.1.65:31339/list?mode=radio" for radio programs or
„http://10.1.1.65:31339/list?mode=all" for TV and radio programs and confirm with playback.

Variant 2: All radio and TV programs in a single list or each in a separated list.

3.8 Live Streaming => Network

For a HTTP protocol variant 3:
Network address for a HTTP
Stream:
„http://10.1.1.65:31339/
watch?tv=1"

Switch single programs.

**Back to program list with the stop
button of the VLC player.**
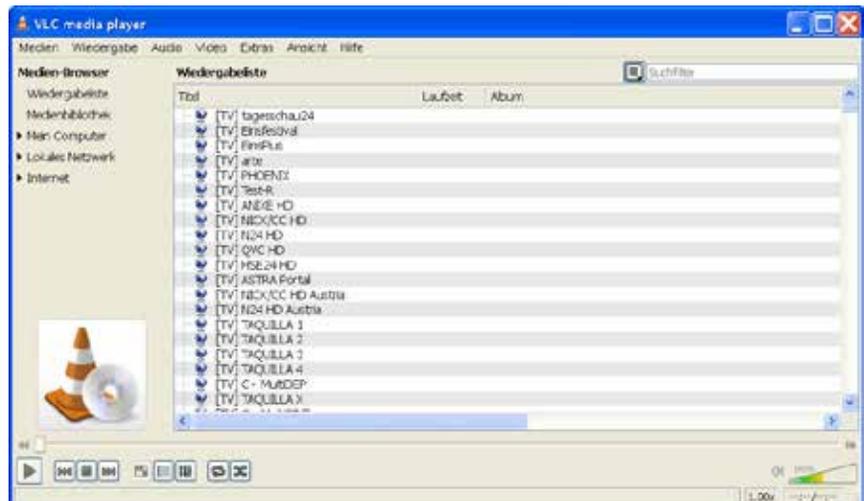
Image 7

In the VLC menu bar, Playback ---> Program.., you can switch between the programs of the streamed transponder
(Image 8).
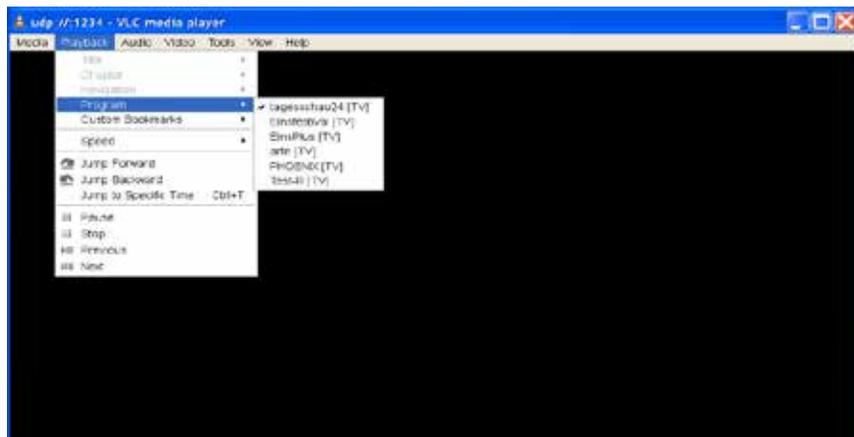
Image 8

3.9 Live Streaming <= Network

(Streaming Client)

Connect the device with your computer or network. Make sure the device communicates with your computer.

HDR / IRD-HD Settings:

The settings you find in:
Menu -> Channelsearch -> Network

Protocol: rtp or udp (raw)

Multicast: Complete network or selected

IP Address: IP-Address of multicast

Port: Standard port is 1234

The only supported transport stream is DVB.

4.0 Information-Window

With the <EXTMSG msg> command you can display a permanent message.

With the <EXTPOPUP msg> command you can display a temporary message.
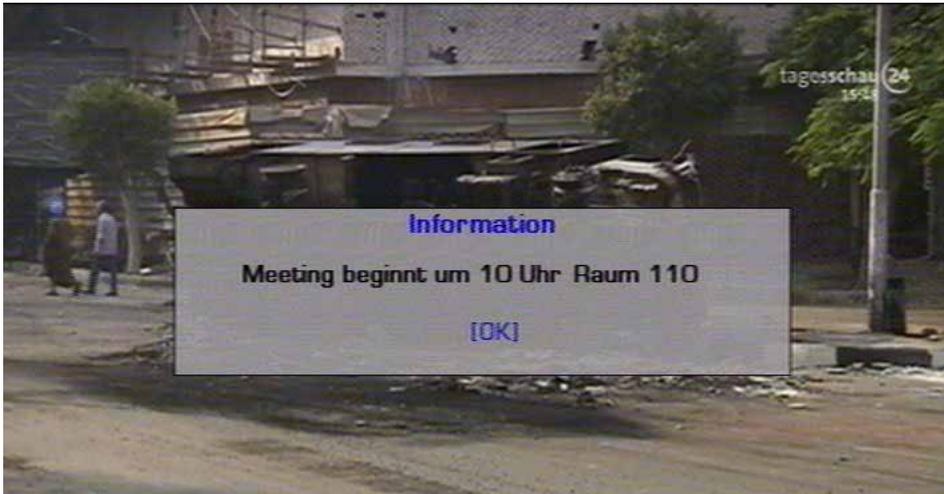
4.1 Update

Audio-, video- settings and programs remain the same after the firmware update.

The usb drive with a **minimal 50 MB** free space available should be used for the firmware update.

Before you write image with the firmware to your usb drive, it should be formatted to FAT 32 format.

NOTE: Only FAT 32 formatted usb drives are suitable for the update.
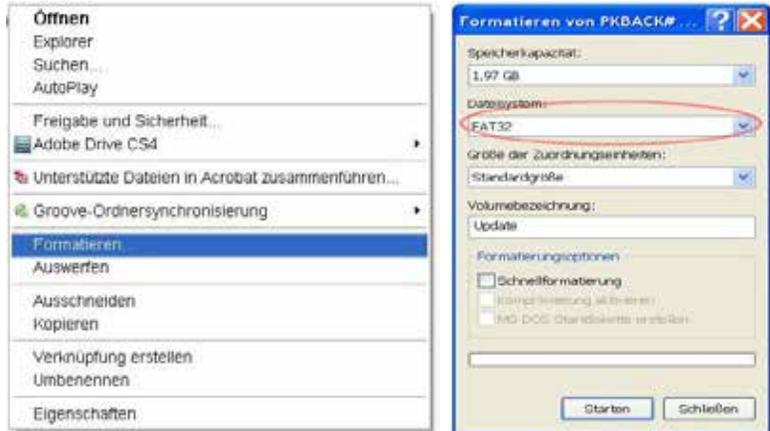
Current firmware updates can be found in ELIUM website:

http://www.elium.de/files/download/elium_ird_update.zip

http://www.elium.de/files/download/IRD_RS232_Protocol.pdf
http://www.elium.de/files/download/Boxedit.exe

1. Save the selected firmware update to your USB drive.
    Make sure that the Zip archive is unzipped.

2. **Until software ver. 1.02.04**
    Plug in the USB drive in the USB-Interface on the front panel of your device. Control with the remote control or web server to Menu -> Technical menu -> restart -> restart receiver (reboot) -> OK. (The receiver can be also controlled with the buttons on the front panel of the device. The information are displayed on the display)
    Do not turn off the receiver while the process is running, it may lead to data loss.

2. **From software ver .1.02.05**
    Plug in the USB drive in the USB-Interface on the front panel of your device. After about 30 seconds the update starts automatically.
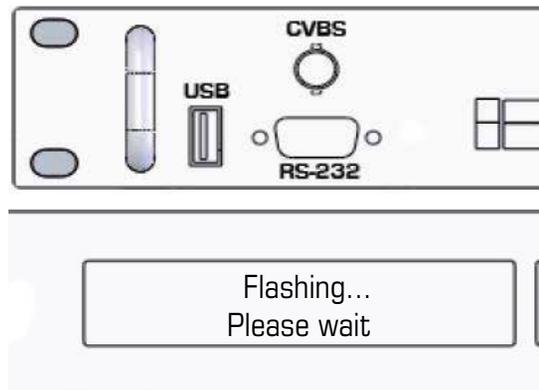
4.1 Update

3. When update completes „Flashing …   OK" prompt appears
   on LCD and you can remove the usb drive from receiver.
   Restart the device by turn the device off and on again.
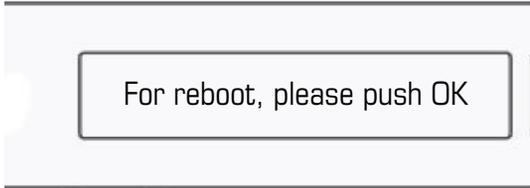
For reboot, please push OK

4. Please confirm the reboot by pushing
   the OK button once, after it´s prompted on LCD.
   The automatic reboot will start after over 10 second.