9910LX

User's Guide

Table of Contents

(A) PRECAUTION!!!

The receiver has been designed and manufactured in compliance with EU consumer safety requirement (CE). Please read the following safety precautions carefully.

1. Connecting Power

- This product operate only in the range of AC 100V ~240V and 50Hz/60Hz. Please check first your power supply to see if it fits this range.
- Please be noted that you need to disconnect from the mains before you start any maintenance or installation procedures.
- Make sure that the power cord is placed in a position where it is easy to unplug it from the mains in an emergency.

2. Overloading

- Do not overload a wall outlet, extension cord or adapter as this may cause electrical fire or shock.

3. Liquid

- This product is not water-proof and should not be exposed to dripping, splashing, or any type of liquid.
- No objects filled with liquid such as base shall be placed on the product.
- Please do not clean the product with wet cloth, which may cause a short circuit.
- No wet objects should be placed near the product.

4. Ventilation

- Allow a sufficient space between the product and other objects to make sure air ventilation of the product.
- Do not block the top or rear of the product with an object, which will close the ventilation holes and lead to a high temperature of the system. This may cause a failure of the product.
- Do not stack other electronic devices on top of the product.
- Do not insert any kind of pointed objects like screw, gimlet, etc. into the ventilation holes of the product.

5. Connecting the DVB-T Antenna

- Disconnect the power of the product before you connect the DVB-T Antenna to the product. Otherwise, it may cause

6. Grounding

- The LNB must be earthed to the system earth for the satellite dish.

7. Location

- Place the product indoor.
- Do not expose the product to rain, sun or lightening.
- Do not place the product near any heat appliances as a radiator.
- Ensure that there is more than 10cm distance from any electrical devices and wall.

8. Lightening, Storm or Not In Use

- Unplug the product and disconnect the antenna cable during a thunderstorm or lightning, especially when left unattended and unused for a long period of time. This will prevent possible damages from power surges or lightening.

9. Replacement of Parts

- Unauthorized part replacements, especially by one who is not a qualified technician may result in damage to the product.
- Ensure that when part replacements are necessary qualified technicians perform the task using the components specified by the manufacturer.

10. Hard Disk Drive (In case of using external USB HDD)

- Do not move the product or turn the power off suddenly while the Hard Disk Drive (HDD) is still running.
- The company shall not be liable for any corruption of data on the HDD caused by careless use or misuse of users.

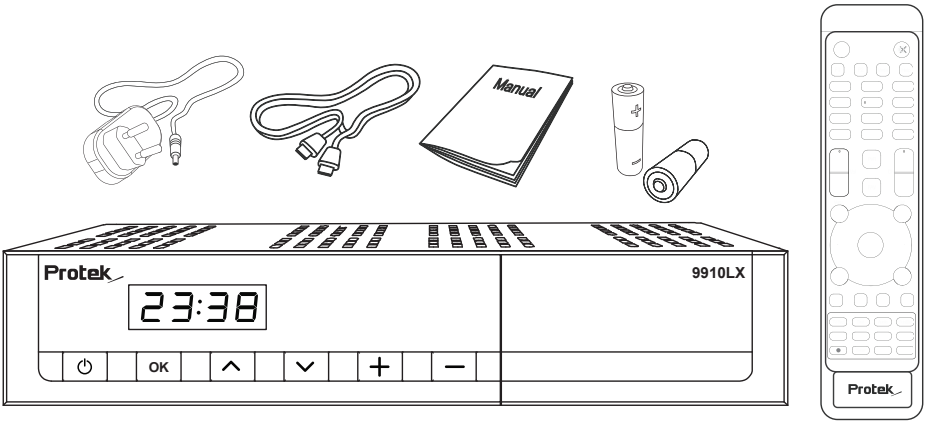
11. Battery

- There is danger of explosion if batteries are incorrectly replaced.
- Replace batteries only with the same or equivalent type.

◎ "WEEE" Symbol instructions.

This product should not be disposed with other house hold wastes at the end of its working life. Please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. This will help prevent harm to the environment or human health form uncontrolled waste disposal.

(B) Packaging Contents

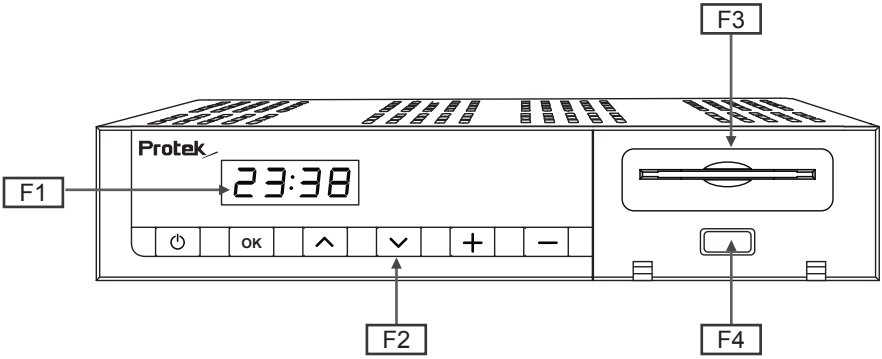


Please check all package contents before using your product.

- Receiver
- Remote Control
- HDMI Cable
- User Manual
- DC Power Adator
- Battery

(C) Product Descriptions

▣ Front Panel



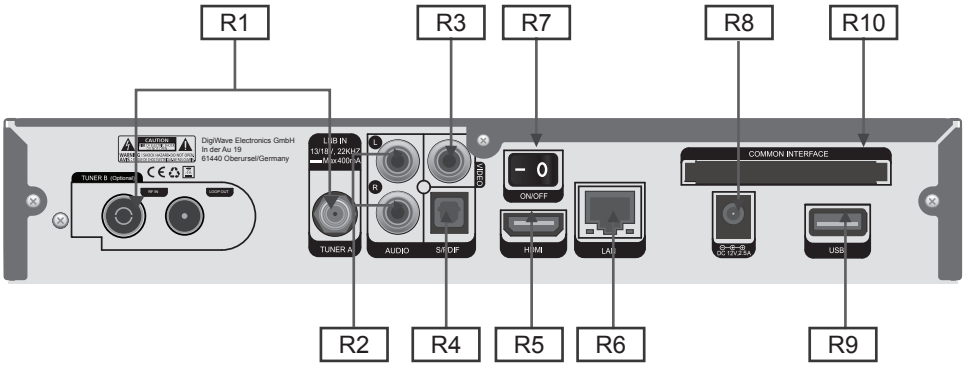
F1: FND Display
Displays the current channel or certain programming function when using the menus.

F2: Button (Power On/Off)

F3: Smartcard Reader Slot
One Smartcard slot is provide.

F4: USB Host
Connects the USB memory stick or external HDD.

▣ Rear Panel



R1: DVB C/T2 Hybrid
Connect DVB C/T2 Hybrid Tuner.

R2: Audio output
Connects to TV using RCA cable.

R3: Video Output
Connects to TV using RCA cable(composite YPbPr).

R4: S/PDIF
Connects to a digital audio system using S/PDIF cable.

R5: HDMI
Connects to TV using a HDMI cable for both audio and video signals.

R6: LAN
Connects the PC or another set top box of the receiver.

R7: On/Off Switch
Powers on/off.

R8: Power
Adaptor to this connector.

R9: USB
Connects the USB Memory Stick or external HDD.

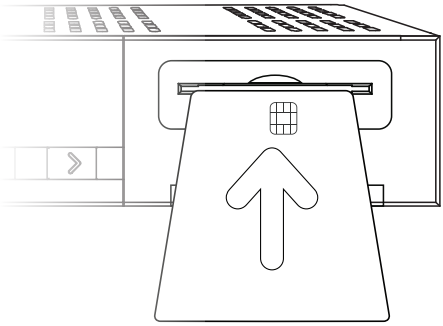
R10: CI Module Slot
CI module slots are provide.

D) Conditional Access

Amongst the channels that are scanned via the receiver, some channel can be properly tuned on only with the corresponding Smartcard. The receiver provides one Smartcard Reader slot and users need to purchase those Smartcards that are required for viewing such subscription based services.

Insertion of Smartcard

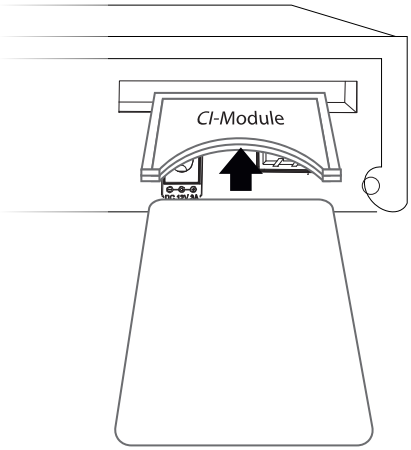
① Insert Smartcard as in the following instruction.
② Make sure that the Smartcard remains inserted while viewing.



Insertion of CAM (Conditional Access Module)

There ore several Conditional Access Systems(CAS), other than Xcrypt that 7424 supports. To be able to watch channels that are encrypted in such CAS as Nagravision, NDS, Irdeto, Viaccess, etc, users need to purchase a CAM that is corresponding to each CAS, as well as Smartcard to decrypt those encrypted channels.

① Insert a Smartcard into the CAM as in the below picture.
② Once the Smartcard inserted into the CAM, insert the CAM into the CI slot.
③ Make sure that the CAM remains inserted while viewing.



(E) Remote Control

. MUTE
Silences the audio temporarily.

NOTE: when Teletext is activated, mute key is also used when toggling between the Teletext page and the lice mode.

. Power
To switch receiver to ON or to STANDBY

. Recording
Displays instantly the recording menu.

. Play/ Pause
Plays the selected file (e.g. recording) at the normal speed.
Pause the live program or recording play.

. Previous, Next

Timer **. Timer**
Sets sleep timer.

. Stop
Stops playing of a recording and goes to the live mode.

. Fast Forward
Fast Forward at up to 128 times faster than the normal speed (x2 / 4 / 8 / 16 / 32 / 64 / 128).

. Fast Forward
Pause the live program or recording play.

Subtitle **. Subtitle**
Displays the subtitle of the current channel if the channel provides subtitle.

TV/Rad **. TV/ Radio**
Displays the TV/Radio Channel list

Audio **. Audio**
Displays the audio track option to choose (e.g. ACS, Stereo).

Text **. TTX**
Displays the teletext information of current channel, if the channel provides teletext data.

FAV **. FAV**
Listed channel

EPG **. EPG**
Returns to the previous screen.

PVR . PVR
Records video in a digital format to HDD & USB storage device.

. Info
To display current channel information.

OK . OK
Confirms the selected menu option.

Help . Help
Displays the programme guide.

. Navigation Keys
Navigates up/down and left/right on the menu options.
Up/down keys are used to call up the channel list.

. Menu
Displays the main menu.

. EXIT
Exits the current menu option into the live mode, or switches one step back of the menu.

Media . Media
Displays the video track option to choose.

. Volume +/-
Adjusts the audio volume.

. Channel +/-
Navigates through the scanned channel list

F1 F2 . F1, F2
Assign a key function of your own. (Air mouse & Vioce optional)

1 ~ 0 . Number Keys
Enter a channel number or numbers required to be input according to menu options.

. Navigation Keys
Navigates left/right on the menu options.

. Color Keys
Each key is assigned a specific function that may be different in each menu.

- Red
- Green
- Yellow
- Blue

(F) Main Features

- FND Display
- 1 x DVB-C/S2 Tuner
- 1 x Plug in DVB-C/T2 Tuner
- DualThread 751 MHz (2000 DMIPS) Broadcom BCM7362 Processor
- 512MB NAND Flash /512MB DDR3 RAM
- Fully Automatic /Manual tuning
- Smartcard Reader
- Common Interface
- Innovative openATV Linux operating system
- Multilanguage menu
- Preprogrammed favorites lists
- Extensive network functions
- Web interface for PC or Smartphone Control
- Teletext
- MultiEPG (Electronic Program Guide)
- Timer programming
- 10/100 MB network interface
- Supports downloadable plugins
- Fully automatic update function
- WiFi support
- Energy saving

(G) Technical Data

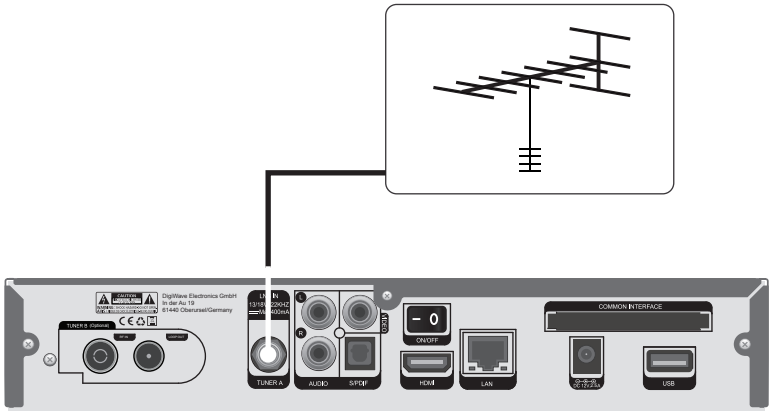
The receiver Technical Specifications		
Front & Side	Standby Button	Standby
	Display	FND Display
	Smartcard Reader	1
	USB 2.0	1
Rear Panel	Common Interface	1
	Sat-IF Eingang/Ausgang	F- Connector
	Video output (analogue)	1 x Cinch-socket(Video)
	Video/audio output(digital)	1 x HDMI
	Audio output (analogue)	2 x Cinch Socket
	Audio output (digital)	SPDIF
	USB 2.0	1
	Ethernet	1
Power	AC Adaptor	DC 12V 2.5A
	Power consumption (Max./typ. Operation/stand-by)	30 / 20 / 1W
Video	Video resolution	CCIR 601 (720 x 576 reihen), 576p, 720p, 1080i
	Video decoding	MPEG-2, MPEG-4 kompatibel
	Input data rate	2 – 45 MSymb/s
	S/N	> 53 dB
Decoding	Decoding	Digital Audio,MPEG-1, Layer 1, 2, 3
	Sampling Rate	32 / 4.1 / 48 kHz
	S/N	> 65 dB
Tuner & Channel	Input Connector	IEC 169-2 Female
	Frequency Range	470 MHz to 862 MHz
	FFT Mode	DVB-T : 2K, 8K DVB-T2 : 1K, 2K, 4K, 8K, 16K, 32K
	FEC Mode	DVB-T : 1/2, 2/3, 3/4, 5/6, 7/8 DVB-T2 : 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
	Guard Intervals	DVB-T : 1/4, 1/8, 1/16, 1/32 DVB-T2 : 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 19/128, 19/256
General	Dimensions(W x H x D)	255 x 40 x 205 mm
	Weight	0.8 kg

II. Installation of the receiver

This chapter will guide you through the whole installation process of the receiver. Please read each section carefully to make sure that the system runs properly.

1. Connecting DVB T/T2 Antenna

The receiver is integrated with one DVB-T tuner, and one of the first steps is to connect terrestrial cable(s) to STB in order to gain optimal signal quality. You can either choose one of the following connection methods depending on the equipment you have.

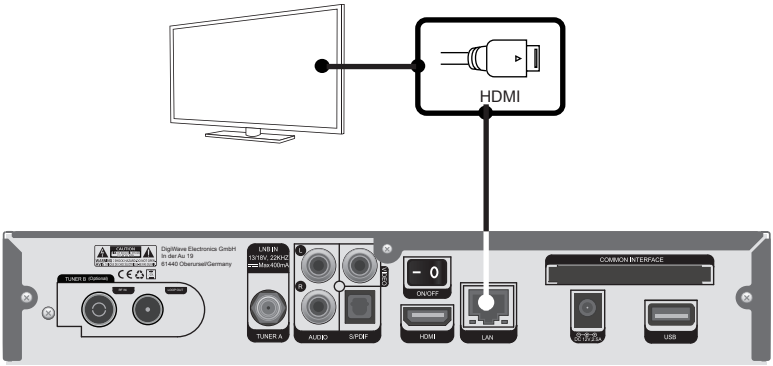


2. Connecting the TV (and VCR)

The receiver provides a variety of audio/video connection methods.

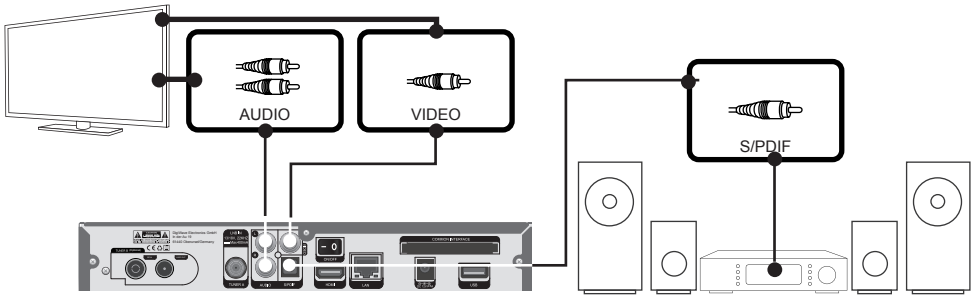
A. Connecting TV via HDMI cable

For the sake of the best picture quality, especially for digital TV, HDMI connection is recommended. Most HDTVs Have HDMI connectors to ensure the highest picture quality. In the rear panel of the receiver. one HDMI connector is available for this purpose. Connect your TV to the receiver. using a HDMI cable as follows.



B. Connecting TV via Component Cable

The secondly recommend TV connection for digital TV is vi component cable (YPbPr). However, unlike the HDMI connection which delivers audio and video signal at the same time, YPbPr connection requires additional audio connection either via RCA cable (Stereo L/R) or S/PDIF as follows.



NOTE: *When you have an A/V receiver with S/PDIF digital audio input, this connection is recommended to enjoy the best audio quality, especially for the Digital sound.*

III. First Time Installation (using Wizard)

When you turn on the receiver for the first time after purchase, an installation wizard will begin step by step.

NOTE: OK *key is used for confirmation and turns to the next step. Press* ***EXIT*** *key to return to the precious page. This manual has been edited in reference to the standard SD skin. You can change it to the default HD skin.*

Step 1. Video Input Selection

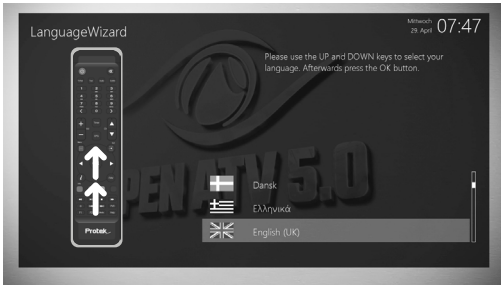
The receiver various I/O for video connection and here you can choose the main video connection port for your receiver. Use UP/DOWN key to scroll up and down to find the video connection port you want.

Step 2. Video Mode Selection

The receiver provides various modes for video and here you can choose the video mode for your receiver. Use UP/DOWN key to scroll up and down to find the video mode you want.

Step 3. Language Selection

The receiver provides various languages and here you can choose the main language for your receiver. Use **UP/DOWN** key to scroll up and down to find the language you want.



Step 4. Configuring Terrestrial Connection

From now on you need to configure the Terrestrial connection. You have two options:

- Use wizard to set up basic features
- Exit wizard

You are strongly recommended to use wizard as it is designed to guide you through the configuration process.

Step 5. Check The Internet Connection

Please connect your receiver to the internet and you can check internet connection.
Use up/down key to scrol up and down to check the internet connection or skip it.

Step 6. Configuring Tuner A

Using **LEFT/RIGHT** key, you can choose one of the following Configuration Modes:

- DVB-C
- DVB-T2

IV. Basic Operations

1. Program Information (Infobar)

[ⓘ : Press OK key]

Whenever you change the channel, infobar is always displayed for 5 seconds (default setting). Infobar is designed to provide you comprehensive information of the channel that you are currently watching.

• Press **OK** to call up infobar.

① **A**: the tuner being used for the current channel.
② **SNR** (Signal to Noise Ratio) : Signal Level
③ **AGC** (Automatic Gain Control) : Signal Strength
④ The name of the current channel
⑤ Remaining time of the current program
⑥ The current program
⑦ The next program
⑧ **REC**: Highlighted in red when recording is in progress.
⑨ **CAS**: Encrypted program
⑩ **Teletext**: Highlight when the program provides Teletext
⑪ **16:9** : Screen ratio
⑫ **RED**: to activate recording
⑬ **GREEN**: to call up Subservices, if available
⑭ **YELLOW**: to activate Timeshift
⑮ **Extensions**: to call up a menu for Sleep Timer and Graphical Multi EPG

2. Channel List (Channel Selection Menu)

[ⓘ: Press , CHANNEL key]

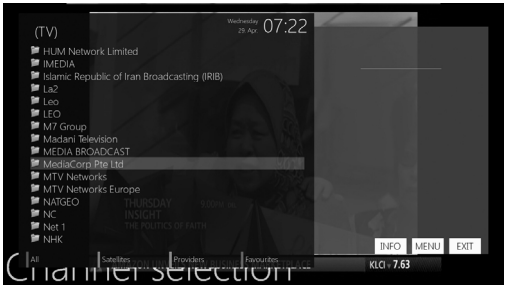
If press **UP/DOWN** key, this will activate ***Channel Selection*** Menu as below.

Four types of the channel lists are available to help you manage your channel selection.

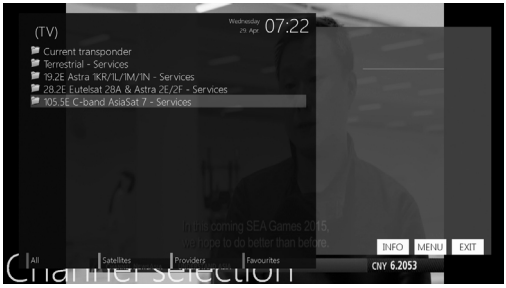
• **RED** displays the list of all scanned channels.

• **GREEN** displays the list of all satellites scanned.

Per each Terrestrial, channels are arranged according to ***Services, Provider,*** and ***New.***



• **Yellow** displays the list of providers.



• **BLUE** displays the list of your favorite channels.

In order for you to add certain channels to this ***Favorites*** list

① Call up the ***Channel Selection*** list by pressing **UP** or **DOWN** key.
② Go to ***ALL*** list by pressing **RED** Key.
③ Select the channel that you want to add to the ***Favorites*** list.
④ Press **MENU** key on the selected channel and the following menu appears.
⑤ Choose ***"add service to favorites"*** and press **OK**.
⑥ Go to the ***Favorites*** list by pressing **BLUE** to confirm that the selected channel is correctly included in the list.

3. Electronic Program Guide (Event View)

[ⓘ : Press EPG key]

The Electronic Program Guide (EPG) displays the program information of each channel, if provided, in time and date order. You can view the detailed program information by pressing **EPG** key and the following menu, ***Event view*** appears.

Detailed information of the current channel will be displayed on EPG. On this menu, three options are provided.

- **RED (Similar)**
  This option helps you find similar programs. If there are one or more programs that are similar to the current program, ***EPG Selection*** widow displays them as below.

- **GREEN (Add Timer)**
  If you press **GREEN** key, ***Timer entry*** menu appears as below. This option is used to set up a new timer for recording or zapping.

  - **Name**
    Displays the name of the selected program.
  - **Description**
    Displays a short description of the selected program,.
  - **Timer Type**
    • Select ***Zap*** for channel tuning reservation.
    • Select ***Record*** for recording reservation.
  - **Repeat Type**
    • Select ***Once*** for one time of zapping or recording reservation.
    • Select ***Repeated*** for repeated zapping or recording reservation.
    • Repeats – This option is given only when you selected ***"Repeated"*** in the Repeat Type.
    You can reserve zapping or recording per Daily / Weekly / Mon - Fri / User-defined.
  - **Date**
    Displays the current date. This entry is on when you selected ***Once***, in the Repeat Type.
  - **Start Time**
    You can set the time to begin recording or zapping.
  - **End Time**
    You can set the time to end recording or zapping.

- **Channel**
  This entry allows you to change the channel. Press **LEFT/RIGHT** key to call up ***channel Selection*** menu. You can select a different channel from this list using this option. To return to ***Timer entry*** menu, press **EXIT**.

• **YELLOW (single EPG)**
Press **YELLOW** while ***Event view*** menu is on, to call up the program event schedules of the selected channel.
In this state, you can sort the list according to A - Z order or Time by pressing **YELLOW.**

NOTE: *To add a timer for recording or zapping, press GREEN.*

• **BLUE (Multi EPG)**
Press **BLUE** to activate ***EPG Selection Multi*** window.
- You can move the previous or next program, within the same channel by using **YELLOW** (Previous)/ **BLUE** (Next).

NOTE: *Not all channels provide EPG information and thus in case of no EPG data, nothing will be displayed except for the channel name.*

- You can switch to another channel by using **UP/DOWN** key.
- **RED** key is used to instantly tune into the selected channel.
- **GREEN** key is used to reserve recording or zapping of the selected program.

4. Plug-ins

[ⓘ : MENU ▤ > plugins]

The receiver is integrated with standard 10/100Mbps Ethernet with RJ45 connector. You are recommended to use this network capability of the receiver to fully enjoy the system. If receiver's network connection is established, you can directly download plug-ins from a designated website of the receiver.

① Press **MENU** and select ***Plugins*** menu to active ***Plugin browser.***
② Press **GREEN** key to download a list of plug-ins available.
③ Once the download is done, a list of plug-ins will be displayed.
④ Select a plug-in to download.
⑤ You can check if the download is done properly on the ***Plugin browser.***

From this site, you can check available plug-ins to download as below.

V. Network Setup

The receiver is a very sophisticated device designed to allow users a variety of system setting options as detailed as possible. You can fine-tune your receiver to be your OWN system to fit your taste. This chapter will guide you through the entire menu of system configuration.

Prior to System Configuration, please take a notice on the menu structure of the receiver first.

[ⓘ : MENU ▤ > Setup > System > Network]

The receiver is integrated with standard 10/100Mbps Ethernet with RJ 45 connector. You are recommended to use this network capability of the receiver to fully enjoy the system. You can set up the network settings through this ***Network Configuration*** menu.

In the ***Network Configuration*** menu, you will see five sub menus as follows:

① **Adapter settings**

Through this menu, you can set the basic Ethernet configuration.

• **User Interface**

YES is used to activate the Ethernet. If you set this option at NO, the Ethernet will not work.

• **Use DHCP**

YES is used to use ***DHCP (Dynamic Host Configuration Protocol).*** If you set this option at ***YES***, it will automatically detect the correct IP address. ***NO*** is used when you want to use a certain fixed IP address. In this case, you need to enter correct addresses in each field.

1. Service Searching

[ⓘ : Press MENU ▤ > Setup > Service Searching]

Here you set up the tuners on your receiver and run channel scanning automatically or manually.

A. Tuner Configuration

[ⓘ : MENU ▤ > Setup > Service Searching > Tuner Configuration]

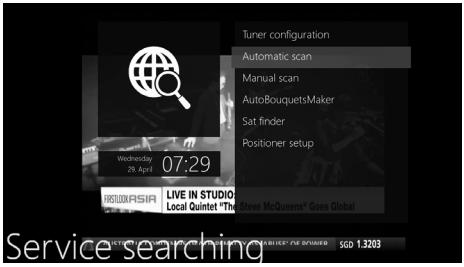
If you the First Time Installation process , the Tuner A is already configured.

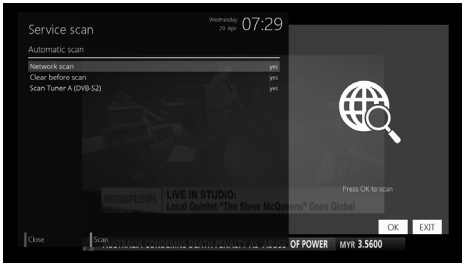
You can check the information of Tuner A and which satellites are scanned by Tuner A as follows.

B. Automatic Scan of Services

[ⓘ : Press MENU ▤ > Setup > Service Searching > Automatic Scan]

The easiest way to scan services is to use ***Automatic Scan***. In the ***Automatic Scan*** menu, there are two options to choose from as below.





• **Clear Before Scan**

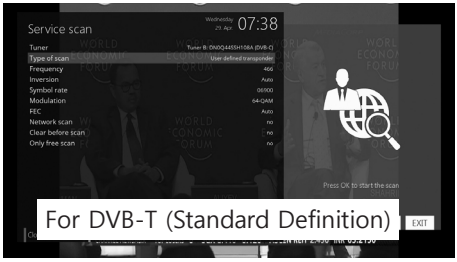
YES is used when you want to delete the existing channel list before you start the automatic scan. If you want to keep the existing list, select ***NO.***

Press **OK** to activate the automatic scan. This will take some minutes. As the scan proceeds, you will see the progressive bar and the newly found services underneath.

C. Manual Scan of Services

[ⓘ : MENU ▤ > Setup > Service Searching > Manual Scan]

If you know well enough to configure each exact setting required for manual search of services, you can do manual scan as well. There are many parameter values that you need to decide as below.



For DVB-T (Standard Definition)

For DVB-T2 (High Definition)

Amongst other things, the below parameters are what you need to decide prior to performing manual scan.

① Tuner

DVB C/T/T2

② System

Here you have two options between DVB-T(SD) and DVB-T2(HD).

③ Frequency

You need to enter the exact frequency of the transponder that you want to scan.

④ Symbol Rate

You need to enter the exact symbol rate of the transponder that you want to scan.

⑤ Polarity

Here, you have options for Horizontal, Vertical, Circular Left and Circular Right. You need to know the polarity of the transponder that you want to scan.

⑥ FEC (Forward Error Correction)

You need to enter the exact FEC value of the transponder that you want to scan.

⑦ Modulation

Here you have two options for QPSK (SD) and 8PSK (HD).

⑧ **Network Scan**

Here you have two options for ***YES*** and ***NO. NO*** is used to scan the transponder (TP) based on the data that your receiver currently has. ***YES*** is used to scan the TP not just based on the existing TP data but also using new TP data, if there is TP data newly transported from the TP. Naturally, ***YES*** option takes longer while it may results in a better scan result.

⑨ **Clear Before Scan**

YES is used when you want to delete the existing channel list before you start the automatic scan. If you want to keep the existing list, select ***NO***.

⑩ **Only Free Scan**

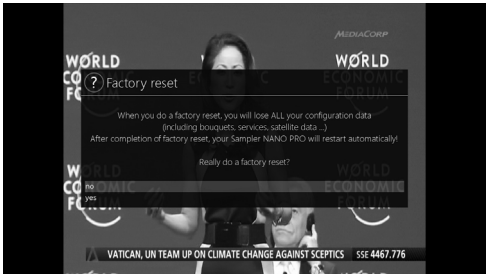
Here you have two options for ***YES*** and ***NO.*** You want to scan only Free to Air channels without any encryption, select ***YES.*** Otherwise, select ***NO*** to scan all FTA and CAS channels.

Press **OK** to activate the manual scan. This will take some minutes. As the scan proceeds, you will see the progressive bar and the newly found services underneath.

2. Factory Reset

[ⓘ : MENU ▤ > Setup > Factory Reset]

If you want to erase all installed service list as well as configurations, run the ***Factory Reset*** process. Select ***YES*** in the below menu to run the factory reset.



Upon the completion of factory reset process, your receiver will reboot automatically and start the ***First Time Installation*** process.

NOTE: *If you do this factory reset, all of your configuration data including bouquets, service lists, satellite parameters and so on will be erased.*

Smartcard	Chipkarte, oft auch als Smartcard oder Integrated Circut Card (ICC) bezeichnet, ist eine spezielle Plastikkarte mit eingebautem integriertem Schaltkreis (Chip), der eine Hardware-Logik, Speicher oder auch einen Mikroprozessor enthält.
Teletext	Unter Teletext (in Deutschland auch: Videotext) versteht man eine Kommunikationsform zur Verbreitung von Nachrichten. Texten und Bildhaften Darstellungen, die in der Austastlücke des Fernsehsignals eines Fernsehsenders ausgestrahlt werden, und aus denen der Benutzer gewünschte Angaben zur Darstellung auf dem Bildschirm eines Fernsehgerätes auswählen kann.
YPbPr	Das YPbPr-Farbmodell wird vor allem bei der analogen Übertragung von Videosignalen aus digitalen YCbCr-fsrbkodierten Quellen wie DVD oder DVB verwendet, die meist per Component-Video-Anschluss erfolgt. Ursprünglich spezifiziert und kurzzeitig benutzt wurde es auch für analoges HDTV. YPbPr wird oft irrtümlich mit YUV bezeichnet. Bei YUV handelt es sich zwar um ein verwandtes analoges, jedoch auf anderen Umrechnungsformen basierendes Farbmodell. Entgegen weitverbreiteter Anahme wird YUV nicht bei Component-Video-Anschlüssen verwendet, sondern nur beim analogen PAL-Fernsehen (per Antenne, SAT und Kabel) und bei der PAL-Übertragung per Composite Video oder S-Video. Da das YPbPr-Signal die Helligkeits-/Luminanz-Information Y sowie die zwei Farbdifferenz-/Chrominanz-InformationPb und Pr getrennt überträgt, ist keine Modulation oder Quadraturamplitudenmodulation nötig. Dadurch bietet YPbPr ein besseres Bild als das Farbbild-Austast-Synchronsignal FBAS oder das Videosignal Y/C bzw. S-Video.

VI. Copyright - GNU GPL

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, In.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom share and change free software to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge of this service of you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you and do there things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.
We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.
Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original author's reputations.
Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that nay patent must be licensed for everyone's free use or not licensed at all.
The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work base on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".
Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.
You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use on the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)
These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections

when you distribute them as separate works. But when distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable from under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so no) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even through third parties are not compelled to copy the source along with object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this license. However, parties who have

received copies, or rights, from you under this License will not have their license terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipient's exercise of the right granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program. If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply in other circumstances.
It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.
This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program, under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public

License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns
Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.
NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSE FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIED PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANT OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
END OF TERMS AND CONDITIONS

VII. Troubleshooting

Before you contact your local service center, please read the following tips carefully.

NOTE: if the antenna is covered with snow or the RF signal is weakened by heavy rain, the quality of audio and video may become temporarily poor. If you experience poor audio and video quality due to bad weather conditions, please check if your satellite antenna is oriented on the original direction. And see if it is covered by snow. Also, check if your LNB is not damaged.

1. No video on TV

- Check first if the product is powered on and in operation mode.
- Check if the video cable is properly connected between TV and the receiver.
- Check if the satellite cable is properly connected to the receiver.
- Check if the selected channel is currently on air.
- Check if the selected channel is encrypted and if you have a corresponding access smartcard.

2. Problem with audio quality

- Check if your audio cable is connected correctly.
- Check the volume level of your TV and the receiver.
- Check if the receiver or TV is on mute.
- Check the audio option if it is correctly selected for the program that you are currently watching.

3. Channel search problem

- Check if the batteries are correctly charged.
- If you remote control has been used for long, charge the batteries.
- Point the remote control directly toward the receiver.
- Make sure that nothing blocks the front panel display.

4. Channel search problem

- Make sure of tuner configurations are all correctly made.
- Check of the antenna cable(s) are properly connected.

5. Encrypted channel viewing problem

- Check if you have the appropriate Smartcard and/or CAM.
- Take the Smartcard and CAM out and re-insert them to re-initialize.
- Check of your system correctly detects the smartcard and CAM.

6. Recording problem

- Check if the HDD has a sufficient space for recording.
- Check if there is a conflict between recording timer.

VIII. Glossary

8PSK	8-PSK is usually the highest order PSK constellation deployed. With more than 8 phases, the error-rate becomes too high and there are better, though more complex, modulations available such as quadrature amplitude modulation (QAM). Although any number of phases may be used, the fact that the constellation must usually deal with binary data means that the number of symbols is usually a power of 2 – this allows an equal number of bits-per-symbol.
Composite Video	Composite video is the format of an analog television (picture only) signal before it is combined with a sound signal and modulated onto an RF carrier. Composite video is often designed by the CVBS acronym, meaning "Color, Video, Blank and Sync". In German (with PAL being a German invention by Telefunken's Walter Bruch) the abbreviation FBAS (Farbe - Bild - Austastung - Synchron) means the same. It is usually in standard formats such as NTSC, PAL, and SECAM. It is a composite of three source signals called Y, U and V (together referred to as YUV) with sync pluses. Y represents the brightness or luminance of the picture and includes synchronizing pulses, so that by itself it could be displayed as a monochrome picture. U and V represent hue and saturation or chrominance; between them they carry the color information. They are first modulated on two orthogonal phases of a color carrier signal to form a signal called the chrominance. Y and UV are then combined. Since Y is a baseband signal and UV has been mixed with a carrier, this addition is equivalent to frequency-division multiplexing.
Conditional Access System	Several companies provide competing Conditional Access Systems; Irdeto Access, Nagravision, Conax, Viaccess, Verimatrix and NDS are among the most Commonly used CAS systems.
DiSEqC	Standards for Digital Satellite Equipment Control. It is a special communication protocol for use between a satellite receiver and a devise such as a multi-dish switch or a small dish antenna rotor. DiSEqC was developed by European satellite provider Eutelsat, which now acts as the standards agency for the protocol.

EPG	Electronic Program Guide is a digital guide to scheduled broadcast television or radio programs, typically displayed on-screen with functions allowing a viewer to navigate, select, and discover content by time, title, channel, genre, etc. by use of their remote control, a keyboard, or other input devices such as a phone keypad. Content can also be scheduled for future recording by a personal video recorder (PVR). The on-screen information may be delivered by a dedicated channel or assembled by the receiving equipment from information sent by each program channel.
FEC	Stand of or Forward Error Correction. This is a system of error control for data transmission, whereby the sender adds redundant data to its messages, also know as an error-correction code. This allows the receiver to detect and correct errors (within some bound) without the need to ask the sender for additional data. The advantages of forward error correction are that a back-channel is not required and retransmission of data can often be avoided (at the cost of higher bandwidth requirements, on average).
LNB	Stands for Low-Noise Block converter. This is the (receiving, or downlink) antenna of what is commonly called the parabolic satellite dish commonly used for satellite TV reception. The LNB is usually fixed on or in the satellite dish. The purpose of the LNB is to take a wide block (or band) of relatively high frequency, amplify and convert them to similar signal carried at a much lower frequency (called intermediate frequency or IF). These lower frequencies travel through cables with much less attenuation of the signal, so there is much more signal left on the satellite receiver end of the cable. It is also much easier and cheaper to design electronic circuits to operate at these lower frequencies, rather than the very high frequencies of satellite transmission.
PID	Stands for Packet Identifier. This is a set of numbers identifying stream packets contained within a single data stream
Polarization	The orientation of the electrical and magnetic fields of a signal. Satellites use mainly vertical and horizontal polarization.

S/PDIF	Stands for Sony / Philips Digital Interconnect Format. A common use for the S/PDIF interface is to carry compressed digital audio as defined by the standard IEC 61937. This mode is used to connect the output of a DVD player to a home theater receiver that supports Dolby Digital or DTS surround sound. Another common use is to carry uncompressed digital audio from CD player to a receiver. This specification also allows for the coupling of personal computer digital sound (if equipped) via optical or coax to Dolby Digital or DTS capable receivers.
Smartcard	A Pocket-sized card with embedded Integrated Circuits which can process data. It can receive input which is processed and delivered as an output. The card may embed a hologram to avoid counterfeiting. It is used for accessing encrypted TV channels or services.
Teletext	A television information retrieval service developed in the United Kingdom in the early 1970s. It offers a range of text-based information, typically including national, international and sporting news, weather and TV schedules. Subtitle (or closed captioning) information is also transmitted in the teletext signal, typically on page 888 or 777.
YPbPr	A color space used in video electronics, in particular in reference to component video cables. YPbPr is the analog version of the YCBCR color space; the two are numerically equivalent, but YPBPR is designed for use in analog systems whereas YCBCR is intended for digital video. YPbPr is commonly called "component video", but this is a misnomer, as there are many other types of component video (mostly RGB with sync either on green or one or two separate signals)> YPbPr is converted from the RGB video signal, which is split into three components, Y, PB, and PR. * Y carries luma (brightness) and sync information. * PB carries the difference between blue and luma (B – Y). * PR carries the difference between red and luma (R – Y). Sending a green signal would be redundant, as it can be derived using the blue, red and luma information.

Protek

9910LX