



SMART TV

DIGITAL TERRESTRIAL RECEIVER

USER MANUAL



WARNING

DO NOT INSTALL YOUR RECEIVER:

- In a closed or poorly ventilated cabinet;
- Directly on top of or under any other equipment;
- On a surface which might obstruct the ventilation slots.

DO NOT EXPOSE THE RECEIVER OR ITS ACCESSORIES:

- To direct sunlight or near any other equipment that generates heat;
- To rain or intense moisture;
- To any shock which may cause permanent damage to your receiver;
- To any magnetic objects, such as loudspeakers, transformers, etc.;
- To intense vibration;
- Do not use a damaged power cord. It may cause a fire or an electrical shock.
- Do not touch a power cord with wet hands. It may cause an electric shock.
- When you are connecting the cables, be sure that the receiver is disconnected from the mains supply voltage.
- Do not use your receiver in humid environment.

SAFETY PRECAUTIONS:

To maintain your receiver's optimum performance, you are advised to apply the following safety precautions:

- Read this manual carefully and make sure you fully understand the instructions given.
- Refer all maintenance or servicing to suitably qualified personnel
- If you wish, you may clean your receiver with a soft lint-free cloth slightly made damp with a mild soap solution, only after disconnecting from the mains voltage supply.
- Do not use alcohol or ammonia based liquids to clean the receiver.
- Do not open the receiver cover, as you will be exposed to a shock hazard
- Do not open the receiver cover this will void the warranty.
- Do not place any objects on top of the receiver because this might prevent proper cooling of the components inside.
- Make sure no foreign objects fall through the ventilation slots because this could cause fire or an electric shock.
- Wait a few seconds after switching off the receiver before you move the receiver or disconnect any equipment;
- Please ensure that the electrical power supply corresponds with the voltage on the electrical identification plate at the back of the receiver.
- It is a necessity that you only use an approved extension and compatible wiring that is suitable for the electrical power consumption of the installed equipment.
- Never open the cover. It is dangerous to touch the inside of the receiver due to high voltage currents and possible electrical hazards. The warranty will be void if the receiver has been opened.

FEATURES

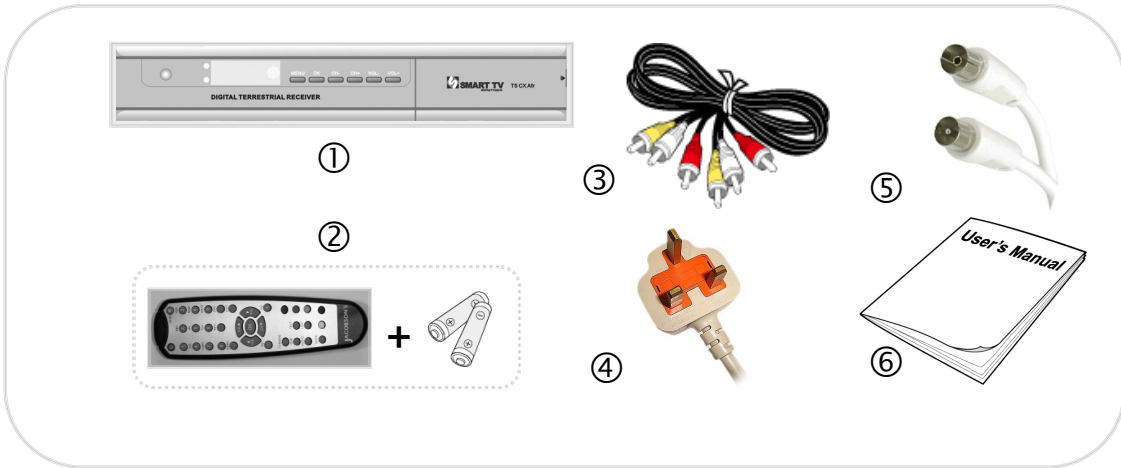
- Display for SD H.264 output
- Easy Graphic menu interface
- First time installation guide
- Multilingual menu supported
- Automatic & Manual channel search
- Dolby Digital 5.1
- 4:3 / 16:9 aspect ratio
- Favorite Channel Management
- Logical Channel Numeric
- Electronic Program Guid (EPG)
- Teletext & Subtitle
- Over The Air download (OTA)
- Conax Conditional Access System supported

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1. YOUR SMART TV RECEIVER

1.1 CHECKING YOUR EQUIPMENT






Make sure you are given the following components:

- ❶ 1 x Receiver
- ❷ 1 x Remote control unit with 2 x AAA (1.5V) batteries
- ❸ 1 x RCA cable (Yellow, Red & White)
- ❹ 1 x Power cable connector and AC adaptor with British Standard power plug
- ❺ 1 x Antenna cable
- ❻ 1 x Instruction manual



















1.2 REMOTE CONTROL



Remove the battery cover at the bottom of the remote control unit and insert 2 AAA (1.5V) batteries. Observe the + and markings printed inside the remote control, and align the batteries correspondingly.

	This is used to switch the receiver in and out of standby mode.
	These buttons are used to adjust the volume.
	

1. YOUR SMART TV RECEIVER

	The help button opens and closes built in help information.
	This is the favourite button, to which you may assign quick access to a favourite function of your choice. (Note: This button is not present on some remote controls, and is replaced by green, yellow and blue button)
	The info button displays a short information (if transmitted) about the current programme. Press again to hide the information.
	The Menu button opens the system main menu. Press again to hide the menu.
	This button is used to toggle between normal and muted sound.
	The Guide button shows the TV guide. Press again to hide the guide.
	The Options button is used to open and close a menu of temporary viewing options (Like subtitling and language options) for the current programme.
	The TeleText button opens and closes the Teletext for the current channel.
 	Cursor up and down used to move up and down the highlight in menus. While watching TV or listening to Radio, this button can be used to go to the next / previous channel.
 	Cursor left and right Used to move left and right in menus. While watching TV or listening to Radio, this button can also be used to adjust the volume.
	The select button is used to confirm or select things.
Numeric buttons	These buttons are used to enter numerical values and to select a specific channel directly by entering its number.
 	Used to scroll the page up or down several lines, for example in the guide, user's manual or channel lists.
	To go back one level at a time within menus or screens and save any changes.
Colour buttons	These configurable buttons as described in "User Manual" on the main menu.
	In TV-mode, use this button to go to the previously visited channel.
	This button is used to easily input multiple digit TV channel numbers.

PLEASE NOTE THAT

- The Infrared sensor on the front of the receiver receives IR (infrared) commands from the remote control unit. Make sure the sensor is not covered or blocked.

1. YOUR SMART TV RECEIVER

1.3 SMART TV RECEIVER

FRONT PANEL



- ❶ Standby ON/OFF: This is used to switch the receiver in and out of standby mode.
- ❷ Program Card Slot: On the right side of the box there is a slot where a program card can be inserted for receiving encrypted transmissions. The chip must *face downwards and inwards* when inserting the program card.
- ❸ The small light emitting diode (LED) on the front panel indicates the state of the receiver:

No light	No power (Check power cable)
Green Light	Receiver is on.
Red Light	Receiver is in low power standby mode.
Single blink of red light	The receiver got an IR (infrared) command from the remote control unit. The IR commands from the remote control unit. Make sure the sensor is not covered or blocked.
Blinking red and green lights	An upgrade is in progress. This may take several minutes. Please wait and do not unplug power.

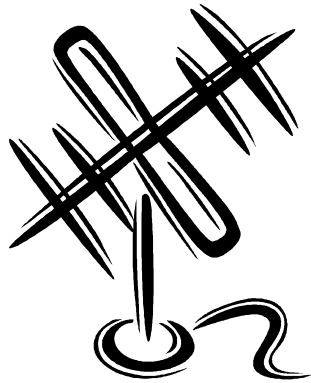
BACK PANEL



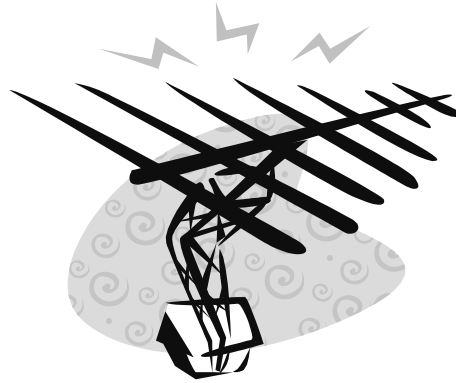
❶ Main power ON/OFF	Main power switch to turn ON or OFF the receiver.
❷ SCART TV	SCART contact for 2x audio & 1x video signal to TV.
❸ CVBS, Audio R & L	3 x RCA contact for audio/video signal to TV.
❹ SPDIF	To connect your receiver to digital audio amplifier.
❺ ANT IN	To connect a terrestrial antenna for receiving signal.
❻ TV OUT	To connect a TV set to receive analogue channels.
❼ RF IN	Digital terrestrial signal input (from other receiver)
❽ LOOP THROUGH	Loop Through output from digital tuner (to other receiver)
❾ DC 12V	Power input from external power adapter.

2. QUICK START GUIDE

2.1 CONNECTING THE RECEIVER TO AN ANTENNA



INDOOR ANTENNA

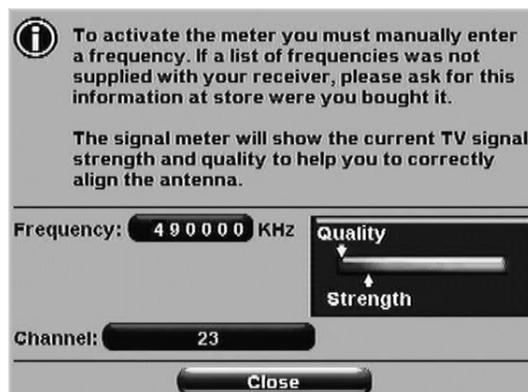


OR OUTDOOR/ROOF-TOP ANTENNA

To receive the broadcast signal, the terrestrial antenna cable should be connected to the RF IN connector at the back of the receiver.

Connect the receiver with a coaxial cable to an UHF antenna. For the best reception, mount the antenna as high as possible and make sure it is directed toward a digital TV transmitter.

If no channels are found during the first time installation process, you are given the option to display an antenna strength meter to help you align the antenna (see picture below).

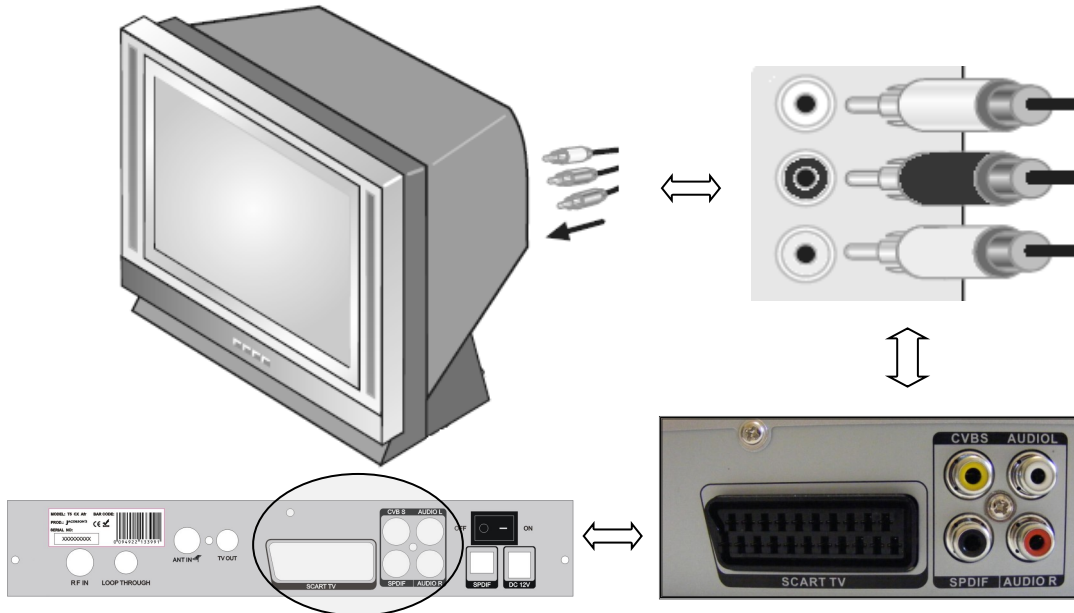


i PLEASE NOTE THAT

- Like other radio transmissions, terrestrial digital TV signals can be blocked by buildings, hills and other obstacles. Bad weather may also block and affect the signal negatively.
- In some centrally connected flats or houses, a roof mounted antenna system may have a filter that blocks digital TV transmissions. If this is the case, the receiver may not work correctly.

2. QUICK START GUIDE

2.2 CONNECTING THE RECEIVER TO A TV



Option 1: Connecting with RCA cable

1. On the back of your receiver you will find the RCA connectors, use Audio Left & Right (Red & white) and Video (Yellow).
2. Install an audio/ video cable between the RCA connectors of the receiver and those of your TV set respectively on your television set, matching the colour of the cable plug to the colour of the TV input.

Option 2: Connecting with SCART cable


1. Connect one end of SCART cable to TV SCART connector on the back of receiver. Connect another end of SCART cable to SCART connector on your TV set.

PLEASE NOTE THAT

- In case you have only one audio input on your TV set, then connect Left (White) audio output of the receiver to audio input of your TV set.
- In case you have a digital audio amplifier, then connect one end of optical cable to S/PDIF output of the receiver.

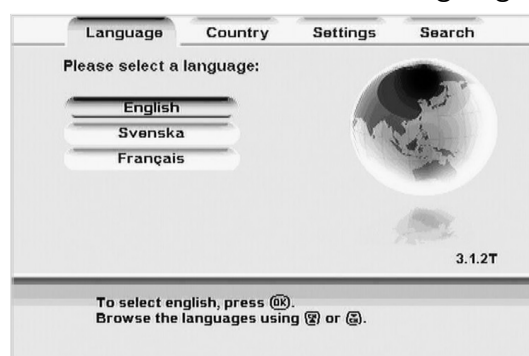
2. QUICK START GUIDE

2.3 LOCATING THE PICTURE

To locate the picture, first make sure your receiver is connected to the TV. Press the  button to turn it on.






When using a composite video (RCA) cable to connect the receiver to the TV, you can usually find the picture from the receiver on a special TV channel, like channel 0, AV, E, EXT, AUX or similar. Please refer to your TV user manual for further details. When you see the language selection view, you have successfully located the picture from the receiver!

FIRST SCREEN ON TV: Language



2.4 INSTALLATION OF BASIC SETTINGS

Once all cables are correctly connected, and you have a picture, you will have to perform a first time installation. The installation phase allows you to specify some basic settings like your preferred language and antenna setup. During the installation, you can always go back and forward to review or change your settings.




- Use the , ,  and  buttons to select and modify menu entries.
- Use the  button to confirm choices.

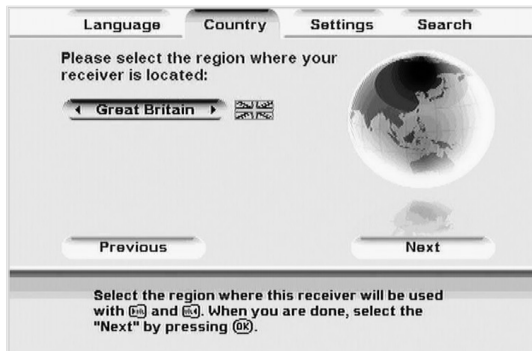
PLEASE NOTE THAT



- All settings can later be modified from the menu system in the receiver.

2. QUICK START GUIDE

2.5 INSTALLATION GUIDE: STEP BY STEP




1. Select the preferred menu language by using the  and  buttons, and press  to continue.

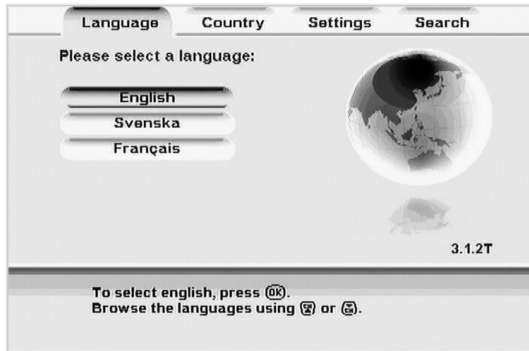


3. Select the type of TV you have by using  and . Use 16:9 if you have a widescreen TV and 4:3 for older TV's. Older TV use 4:3 formats.

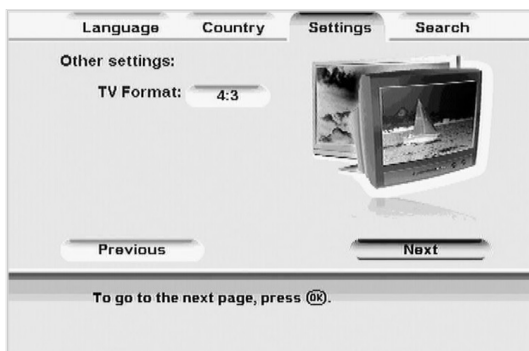


5. When channel searching is done, select the "Next" menu item to continue the installation.

6. The installation is completed. Press  on "Done!" to save all channels and settings and start watching TV. If you want to go back and change anything press  and select "Back" with .



2. Select the country where the receiver is located by using  and  buttons and press  to continue.



4. Here you just have to wait for the automatic channel search to finish (this may take several minutes to complete).

PLEASE NOTE THAT

- If no channels are found, verify that your antenna cable is connected and that the antenna is correctly aligned toward a digital TV transmitter.







3. WATCHING TV

3.1 GENERAL WATCHING

This part describes how you watch TV using the receiver. Thanks to the advantages of the digital TV transmissions, extra features are added to the broadcast, such as information about the current and next programme.

 PLEASE NOTE THAT

- Available options may vary, depending on the actual broadcast of the extra material for the current programme.

- Use the  and  buttons to go the next and previous channel respectively.
- Use the  and  buttons to adjust the volume, and the  button to toggle muted sound on / off.
- Use the number buttons to input a channel number.
- Press the  button to display the information banner about the current programme. Press it again to hide the banner.

 PLEASE NOTE THAT

- Programme information will only be displayed if it is included in the current transmission. Otherwise a "No information" message is shown.




3.2 OPTIONS

Pressing the  or "White" options button will open the "Options" menu.

Depending on your current system settings, and what extra information is currently broadcasted for the watched channel, more or less options are displayed.

3. WATCHING TV

OPTIONS

Audio:	Select the preferred audio track.
Zoom:	This function helps you to adjust the TV picture to better suit your type of TV. For a 4:3 type of TV, this is equal to what is commonly known as Letterbox and Full screen format. If you have a 16:9 type of TV, this function can also be used to zoom the TV picture to fit better.
Channel List:	Change to another list with the  and  button.
Subtitling:	Subtitle language: select accordingly to your preferences. The receiver will automatically select preferred language, if it is present in broadcast.
Lock Channel:	<p>Sets a permanent lock on the current channel. This option is only available if "Channel lock active:" is set to "On" in the "Parental Control" menu.</p> <p>If a locked channel is encountered it can be unlocked by pressing the  button and typing the PIN code. Please note that this is only a temporary unlock which is reset when a another channel is selected.</p> <p>To permanently remove the lock from a locked channel, see the "Parental Control" menu.</p>

PLEASE NOTE THAT

- Some changes under "Options" are only valid for the programme you are currently watching. If you leave the programme, the settings will be gone. To read more about default options to these settings, please see the "System Configuration" help chapter.

3. WATCHING TV

3.3 MENU TYPES

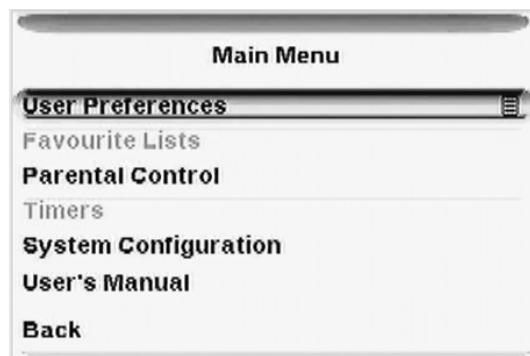
A combination of several types of menu entries appears at the menus, depending on the current menu and context.

Entries to other menus:	Open a sub menu, marked with a "☰" symbol.
Back:	The back entry goes to the previous menu, and is marked with a "↶" symbol. (To close all menus, click the "menu" button).
Cancel:	Cancels any changes that has been done at the current menu and goes back to the previous. Also marked with a "↶" symbol.
Save:	Saves all changes that has been done at the current menu and goes back to the previous. Also marked with a "↷" symbol.
Multiple choice options:	To change options, use the ◀ and ▶ buttons on these menu entries. This type of menu entries are sometimes also known as "thumb-wheels". Marked with a ◀ and ▶ symbol when highlighted.
Number input :	"☐" Use the number buttons to enter numbers. A small highlight cursor appears, indicating where the number will be written.
New PIN:	The default PIN code is "1234". To change the PIN code use the number buttons on your remote.
Dates:	Works in the same way as a multiple choice option, i.e. you use the ◀ and ▶ buttons to select a date.

3. WATCHING TV

3.4 MAIN MENU

The "Main Menu" is the entrance point to many functions of the receiver, such as the "System Configuration", "Favourite lists" and much more. Open the "Main Menu" by pressing the **MENU** button, and close it by pressing **MENU** again. Move the focus by using **▲** and **▼**, and select a menu entry with **OK**.



User Preferences:	In the User Preferences menu you can adjust various settings, such as the look, preferred audio and subtitle languages. <i>See "User Preferences" at page 15 for more details about the different settings.</i>
Favourite Lists	Favourite lists are used to create your own personal channel lists. The lists are a good way to hide unwanted channels or to reorganize the order of the channels.
Parental Control	Parental control settings are used to lock the whole receiver or certain channels by a PIN code.
Timers	Timers are used to program the receiver to wake up at a certain time and tune to a specified channel.
System Configuration	System Configuration menus are used to control the more advanced features of the receiver, such as doing antenna adjustments, channel searches and other system settings. <i>See "System Configuration" at page 16 for more details about the different settings.</i>
User's Manual	Opens the built-in user's manual.

3. WATCHING TV

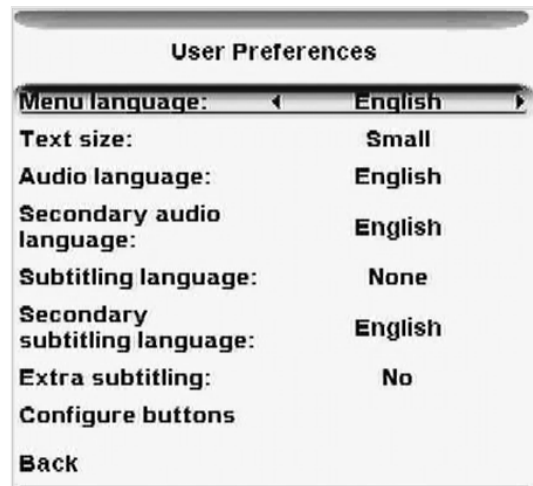
3.41 MAIN MENU: USER PREFERENCES

In the User Preferences menu you can adjust various settings, such as the preferred audio and subtitle languages.

Menu language: Select the preferred language for the system menu.

Text size: Select the size of typeface used for the text in menu, guide, etc.

Hint: A smaller typeface might be harder to read, but more text can fit on the screen.



Audio language: Some TV programs include multiple audio tracks, for example in two different languages. By selecting a preferred audio language, the receiver can select the most suitable audio track for you. If there are no audio tracks available that match your settings, another language may be used instead.

Subtitling language: Select the preferred language for the subtitling. To turn subtitles off, select "None".

Secondary subtitling language: Select the secondary preferred language for the subtitling. (This feature may not be available on all receivers)

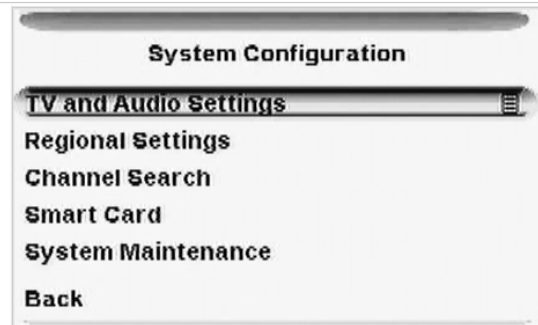
Extra subtitling: If this feature is turned on, extra subtitling may be displayed that is more suitable for hearing impaired, if they are broadcasted for the current programme.

Configure buttons: Allows you to assign a shortcut to a selection of additional functions to the button(s).

3. WATCHING TV

3.42 MAIN MENU: SYSTEM CONFIGURATION



In the "TV and Audio Settings" view you can modify the properties of the audio and video signals to suit your TV and audio equipment.



SYSTEM CONFIGURATION: TV and Audio Settings

TV Format: Select the type of TV you have (4:3 or 16:9), use 16:9 if you have a widescreen TV, otherwise the 4:3 format.

Signal: This setting only affects SCART-cable connected receivers. The "RGB" mode usually gives a better and sharper picture, but some older TVs can only use the "CVBS" mode. The "RGB" mode usually requires a special (fully connected) SCART cable.



RF Channel: This setting is only affecting receivers equipped with an RF antenna output contact. By using the  and  button, you can change the outgoing RF channel number. This can be useful on older TVs to get the picture on a certain channel, or to improve picture quality.


RF Mode: This setting affects the way the RF modulator transmits sound. If you are using the antenna cable to connect the receiver to the TV, and you are having sound problems, changing this setting may help.

OSD Size: The "OSD Size:" setting can be used to specify how much of the TV picture area the receiver may use to display graphics and text. Older TV's usually show less of the picture, while new ones display more.

SYSTEM CONFIGURATION: Regional Settings

Using the regional settings, you may modify settings to suite your geographical position. Among other things, setting the correct date and time format.

Country: Select the country where this receiver will be used with  and  . This will affect the time zone settings.

Time: If needed, adjust the time offset to fit your local time. Change the time in 15 minute steps by using  and  .

3. WATCHING TV

SYSTEM CONFIGURATION: Channel Search

Channel searches are done to update your channel table and to find new channels. In the "Channel Search" menu, you can select "Advanced Channel Search" or "Automatic Channel Search".



Automatic Channel Search: Select "Automatic Channel Search" if you would like to do a normal channel search. All found channels that are new will be added to the "All channels" channel list.

Advanced Channel Search: The "Advanced Channel Search" menu allows you to manually enter channel search parameters that you might find in TV magazines or on the Internet. We do not recommend usage of this function.

Signal Meter: The signal meter view shows the signal reception strength and quality.

New channels: The setting for "New channels" affects the automatic reminders that appear if the receiver detects new channels in the broadcast. In some regions and areas, the reminder might erroneously appear even though there are no new channels, due to differences in the digital TV broadcasts.

Active Antenna Power: Select if the active antenna power should be on or off. Setting this to "On" will feed +5 Volt to the antenna output. This should be set to "On" in case you use the supplied indoor antenna.

Channel Search Results: A channel search may take several minutes before it is completed. All new found channels are listed on the screen and automatically added to the "All channels" channel list.

You can stop the search at any time by selecting the "Stop the channel search" menu item. If the search is finished, you can start it again by selecting "Restart the channel search".

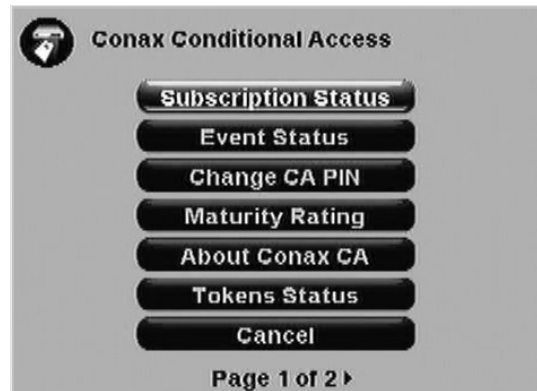
3. WATCHING TV

SYSTEM CONFIGURATION: Smart Card

If you are receiving encrypted channels using a smart card, this menu contains functions and information regarding the Smart Card.

The smart card menu only appears if a smart card is inserted.

See "SMART TV RECEIVER", section "FRONT PANEL" at page 6 for more details about the location of the Card Slot.

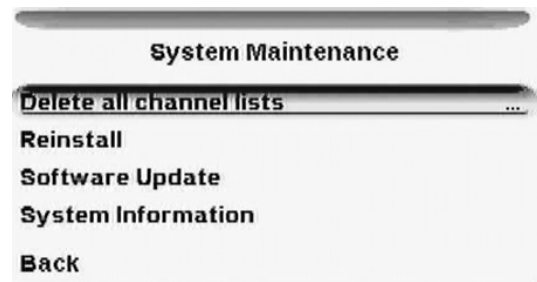


SYSTEM CONFIGURATION: System Maintenance

Delete all channel lists: This function deletes all channel lists. There is no 'undo' for this function and to rebuild the lists, a new channel search must be done.

Software Update: To upgrade the receiver software, select "Software Update" from the menu.

Reinstall: To re-install the receiver, and start the complete installation procedure from scratch, select "Reinstall" from the menu. If you do a reinstallation, all your previous settings, including favourite channel lists, will be erased and set to factory default.



4. TROUBLESHOOTING

Symptom	Cause	Remedy
Indicator ON/OFF on front panel do not light up.	Power cord is not plugged to the wall outlet. Power switch on the back of the receiver is in OFF position.	<ol style="list-style-type: none"> 1. Check connection of the receiver to the mains. 2. Make sure to turn power switch on the back of the receiver to ON position.
Video or Audio absent	Not correct connection of cables between receiver and TV set. TV- Set is switched to a different input than the connected.	<ol style="list-style-type: none"> 1. Unplug all cables from receiver and TV set. Connect them back again carefully. 2. Increase volume level (press VOL+ button on remote control of receiver). 3. Increase volume level on TV set. 4. Switch ON your TV set. 5. Select the input accordingly.
Message "No Channel" on screen.	Bad connection between receiver and antenna. Incorrect settings in Terrestrial setting. Incorrect direction of antenna.	<ol style="list-style-type: none"> 1. Check connection of cable between receiver and antenna. 2. Check signal level and quality. 3. Correct direction of antenna, if necessary.
Remote control doesn't work	Batteries are discharged or not correct installed.	<ol style="list-style-type: none"> 1. Check correct installation of the batteries. 2. Change batteries

ⓘ PLEASE NOTE THAT

- We recommend you consult a professional installer to set up your equipment.
- We also refer you to use the user manual of your TV and your antenna for finding further troubleshooting steps.

5. SPECIFICATION

SMART TV DVB-T Receiver Main Feature		
Terrestrial Input Signal	Frequency	470-862 MHz
	Loop Through	470-862 MHz
	Bandwidth	7 or 6/8 MHz
	Connector	IEC-Female
	Demodulator	COFDM
	FFT mode	2K, 8K
	Constellation	QPSK, 16 QAM, 64 QAM
	Guard Interval	1/4, 1/8, 1/16, 1/32
	Inner Coding Rate	1/2, 2/3, 3/4, 5/6, 7/8
Video	Formats	H.264 Main & High profile level3/MPEG-2 MP@ML
	Aspect Ratio	4:3, 16 :9
	Picture Resolution	480p/576p; 480i/576i
	Output System	DVB-T PAL
	Output Connector	Composite (CVBS); SCART
	RF modulator (opt.)	UHF (21-69)
Audio	Formats	MPEG (Layer 1 & 2)
	Sample Rate	32 / 44.1 / 48 KHz
	Mode	Mono / Stereo / Dual
	Output Connector	SPDIF / SCART
Controller Features	CPU	266MHZ
	RAM Memory	64 MB DDR-RAM
	Flash Memory	4 MB (upgradeable)
Power	Input Voltage	90 ~ 260 VAC 50 ~ 60 Hz
	Consumption (Max)	12 watt (Standby mode 10 watt)