ARIVA

User manual

52E

102MINI

102E

103

202E

203

150COMBO

152COMBO

250COMBO

252COMBO

English

FERGUSON

WARNING !!!



Ferguson satellite receivers support recording on external hard disk drives (HDDs) and flash memories (pendrives). In all instances, the correct operation of the recording function depends on the type of connected memory! You must read the following limitations.

REMEMBER:

1. In order to use an external USB memory, the memory must support the USB 2.0 standard. To ensure stable recording and playback, **you must use a memory with a recording speed of 9.0 MB/s or greater**. Slower hard disk drives and flash memories may not function properly, have problems with recording (image jitter), or not function at all!!!

2. Only disks with one basic NTFS or FAT32 partition (we recommend using the NTFS format) will function properly. If you do not have such a format, prepare the disk on your computer before connecting it to the receiver.

3. Highly fragmented or used memories may also not operate smoothly or correctly.

4. External hard disk drives should be autonomously powered, since the built-in USB port is unable to provide sufficient power.

5. Only one of the two USB ports can be used at the same time!

CAUTION

1. Under no circumstances should you disconnect the USB device from the receiver during recording or playback. Disconnecting during operation may cause damage to the receiver and/or flash memory, and to the recorded data.

2. Do not touch the working device (and in particular the USB connector) with wet hands. Risk of electric shock and permanent damage to the receiver!

SAFETY MEASURES

We request that you read the instruction manual and recommendations set forward therein. Also remember to correctly position the satellite antenna!



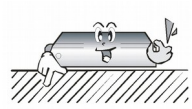
In order to avoid an electric shock, never open the housing. Damage to the warranty seal shall void the warranty.



Disconnect the device from the mains during thunderstorms or when it is not to be used for an extended period of time. Please remember that the warranty does not cover damage to the equipment caused by a lightning strike.



Do not expose the device to direct sunlight. Place it away from sources of heat and humidity. Do not cover ventilation ducts, in order to ensure the correct circulation of air.



Place the device horizontally on a flat, even and stable surface.



If you move the device from a room that is warm to one that is cold (or vice versa), wait at min. 1 hour before connecting it to the mains. Otherwise, problems may arise.



The device should be placed away from vases, bottles, aquariums and other water containers in order to avoid damage. Do not touch the mains plug with your bare hands.



Do not place any objects on the housing of the device. This may cause overheating and reception problems.

Before commencing maintenance or installation work, disconnect the receiver from the mains. Do not clean the receiver with alcohol or liquids containing ammonia. If necessary, clean it with a soft, lint-free cloth wetted with a gentle solution of water and soap.

- Do not connect any cables when the mains plug is in the socket.
- Check the condition of your cables. Damaged cables may cause a fire.
- Please disconnect the receiver from the mains before connecting any cables.

DOWNLOADABLE SOFTWARE

Ferguson has taken every effort to provide users with software updates in order to ensure that the parameters of the satellite television receiver are up to date. Ferguson reserves itself the right to amend, change or modify the software used in the satellite television receiver as it shall choose and without prior notification. The latest version of the software is available on the website http://www.ferguson-digital.eu

ABOUT THE INSTRUCTION MANUAL

Ferguson Sp. z o.o. has made every effort to provide the most current information about its products. Ferguson Sp. z o.o. does not grant any guarantee as to the contents of the present instruction manual and disclaims any implied guarantees concerning market value or suitability for specific purposes. The information contained herein is an instruction intended to enable the correct usage and maintenance of the receiver.

Ferguson Sp. z o.o. reserves itself the right to introduce amendments, changes or translations of the instruction manual without prior notification thereof. For this reason, we recommend you regularly visit our website in order to obtain the latest information.

MARKINGS AND SIGNS APPLIED TO THE RECEIVER

Digital signal transmission logo.
This logo informs that the receiver conforms to the Digital Video Broadcasting standards.

Risk of electric shock - do not open.
This notice warns the user not to open the receiver housing. The housing may be opened solely by authorized service technicians.

When this crossed-out wheeled bin symbol is attached to a product it means that the product is covered by the European Directive 2002/96/EC. Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste. Correct disposal of your old product helps to prevent potential negative consequences for the environment and human health.

Your product contains batteries covered by the European Directive 2006/66/EC, which cannot be disposed with normal household waste. Please inform yourself about the local rules on separate collection of batteries because correct disposal helps to prevent negative consequences for the environmental and human health.

Your product is designed and manufactured with high quality materials and components, which can be recycled and reused.

CE logo.
The logo informs that the receiver conforms to the terms and conditions of Directive 2004/108/EC concerning observance by Member States of provisions regulating electromagnetic compatibility, and to the terms and conditions of Directives 2006/95/EC concerning observance by Member States of provisions regulating low voltage electricity and safety with relation to the handling and operation of electrical equipment.

R&TTE Hereby Ferguson Sp. z o.o., declares that the device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. You can find the Declaration of Conformity on www.deklaracje.ferguson.pl

This product has been designed, tested and manufactured according the European R&TTE directive 1999/5/EC.

Double insulation logo.
This logo informs that the receiver is an electrically safe device, provided that it is used in accordance with the recommendations set forward in the chapter concerning safety.

Hot surface mark
CAUTION: HOT SURFACE. DO NOT TOUCH. The top surface over the internal heat sink may become hot when operating this product continuously. Do not touch hot areas, especially around the "Hot surface mark" and the top panel.

When this logo is attached to a product, it means a financial contribution has been paid to the associated national recovery and recycling system.

BASIC INFORMATION ABOUT THE RECEIVER

1. Main features

- ✔ Reception of high definition channels
- ✔ Scaling of PAL signals to a resolution of 720p or 1080p
- ✔ Availability of programmable timers
- ✔ Separate lists of favourite, TV and Radio channels
- ✔ Quick channel search function (QuickFind)
- ✔ Teletext and on-screen captions
- ✔ DiSEqC 1.0, 1.1 and DiSEqC 1.2, USALS
- ✔ MPEG-2, MPEG-4, MPEG-4 AVC/H.264 standards
- ✔ Compatible with DVB-S2, DVB-S, DVB-T2 and DVB-T systems (depending on model)
- ✔ Card reader for pay-per-view television
- ✔ Common Interface (depending on model)

2. Contents of box

Unpack the receiver and check whether all of the following elements are present

- ✔ 1 x remote control unit
- ✔ 1 x instruction manual
- ✔ 1 x receiver

3. Important instructions concerning handling of the receiver

The screen menu (OSD) simplifies operation of the receiver and has made it possible to reduce the number of keys on the remote control. All of the functions are displayed on the screen and may be controlled by means of a small number of keys. Common functions have been connected in one "MENU". The selected function is coloured. Depending on the selected option, various "function keys" are displayed: red, yellow, green, blue and white in the form of graphics and descriptions. The colours represent various functions in individual "Menus". The selected function is activated by pressing a key on the remote control unit. The so-called function keys are active only when in the appropriate field there is information about it. The user interface makes it possible to navigate within a menu and between functions in a number of different ways. Certain buttons on the remote control allow direct access to functions. The buttons are multi-functional, i.e. their functions depend on previously activated elements.

NOTE:

Please keep in mind that new software may change the functionality of the receiver. Photographs and descriptions included in the instruction manual are for informational purposes only. If you should notice an error, please report it - we shall make every effort to have it rectified.

4. Remote control

Due to the standardization of Ferguson equipment, the majority of these devices use the same remote control unit RCU540 or RCU650. This means that not all keys are used by this equipment model!

ARIVA	52E	102mini	102E 103	202E 203	150Combo 152Combo	250Combo 252Combo
RCU	540	540	540	540	540	650

	Turns the receiver on and sets it in standby mode.
	Switches the sound on and off.
back	Returns to the previous submenu, or exits the menu. Returns to the previously displayed channel.
guide	Displays the electronic programme guide.
menu	Displays the main menu on-screen.
F1	Switching between the list of television and radio programmes.
F2	Changes the active satellite for the channel list.
F3	Used to switch between the resolution selected in the menu and the default resolution of 576i. Allows the user to restore proper functioning of the receiver following the selection of a resolution not supported by the television.
F4	Returns to the previously displayed channel.
pvr	Displays the USB menu, if a USB memory device has been connected.
fav	Displays a selection of favorite channel lists.
vol	Used to change the volume level (lower, higher).
ch	Switches to the next or previous channel.
info	Displays information about the current programme.
text	Switches on the teletext on-screen, if this is available.
audio	Switching between soundtrack versions, if these are available.
sub	Switches the on-screen captions on and off, if these are available.
find	A quick search for channels according to successive name letters.
edit	Not used.
ratio	Change the aspect ratio of 16:9, 4:3, etc..
rec	Buttons used to operate the recording, playback and time shift mode functions.



RCU650

RCU650 is 5 in 1 universal remote control is suitable for TV sets, A/V receivers, tuners, BD/DVD players, CD players, DVR players, various STBs (satellite, cable, terrestrial, IPTV), amplifiers and other devices from common manufacturers. The universal remote control can execute basic device functions.



	Power button turns on the device or sets it in standby mode. Blue LED flashes to show that button is pressed.
ARIVA stb	Predefined **stb** button for Ferguson Ariva STBs. It is not possible to setup another code set or use learning function.
tv amp bd aux	Device buttons can be used for device of your choice. You can setup any code set and/or use learning function.
1, 2, 3, 4, 5, 6, 7, 8, 9, 0	Select particular channel number on a channel list. Enter numeric values. enter the device code during set up
find	Learn a new code from original remote control
WEB	Direct access to internet services offered by receiver.

To make your remote control ready for use, you need to carry out one of the following steps:

Set up device via auto search

1. Switch on the device that you like to control.
2. Point the remote control at your device. Press and hold down the **device** button (e.g. TV) for 5 seconds. The LED turns on and after a moment LED start flashing, that means RCU650 is in auto search mode and you can release **device** button.
3. The "Volume+" signal is automatically transmitted from the remote control to the device (code scan). As soon as the volume of the device (e.g. TV) changes, immediately press **device** button to stop the auto search.
   If the device you are searching for is a CD player, Tuner, TAPE, or AUX then "Power" (instead of "Volume+") signal is automatically transmitted from the remote control to the device. As soon as the device turns off, press **device** key to stop the search. You need to turn on the device by **Power** button before you check other button function.
4. Check the function of the other buttons on the remote control. If none of the buttons function (i.e. the search was not be stopped in time) or the majority of the buttons do not function correctly, restart the search (see steps 2 to 4) to find a suitable code. If the majority of the buttons function correctly, set- up has been successful. Re-press the **device** button (e.g. TV) to save the code and to terminate the set-up mode.

Note:

- Entering the auto searching mode, it will search forward from the current code.
- Sometimes, remote control does not work properly just because auto search was not stopped in time. In this case, just enter into manual search again, and press **Vol–** button approx. every 1.5 seconds to search backward the code database.
- If you are not satisfied with certain buttons assignments, or some functions are missing, then you can use additionally learning function.

Setup device via brand name code

1. Switch on the device that you like to control.
2. Find the code number of your device brand in the code list (e.g. Ferguson 1244) from the relevant device group (e.g. DVB-T).
3. Press and hold the **device** button (e.g. AUX) for three seconds. Release the device button as soon as LED lights up, now it is in set up mode.
4. Enter the 4-digit device code (e.g. 1244 for Ferguson DVB-T) within 10 seconds. If an entry is not made within 10 seconds, the set- up mode is automatically terminated.
5. The LED turns off if the remote accepts the code. If the LED flashes three times, that means the code may be wrong, and the remote control remains in set-up mode, enter the correct code from the list again in good time.
6. Check the function of the buttons on remote control. If it does not function correctly, try another 4-digit device code from the list under the same brand. Repeat steps 3 to 6 until all the basic functions operate correctly.
7. Exit the set-up mode by pressing the **device** button.

Note:

- If you are not satisfied with certain buttons assignments, or some functions are missing, then you can use additionaly learning function.
- mode is automatically terminated if no button is pressed for 10 seconds.

Setup device via manual search

1. Switch on the device that you like to control.
2. Point the remote control at the device. Press and hold down the **device** button (e.g. TV) for 3 seconds. The LED lights up and the remote is in manual set-up mode, release the device button now.
3. Press the **Vol+** button approx. every 1.5 seconds.
4. As soon as the volume of the device (e.g. TV) changes or the device turns off, check whether the other buttons on the remote control function correctly. If the majority of the buttons does not function correctly, press the **Vol+** approx. every 1.5 seconds to initiate the reactive code (manual search is continued, see steps 3 to 4).
5. If the majority of the buttons on the remote control functions correctly, save the code by pressing the **device** button (e.g. TV) to terminate the manual search.

Note:

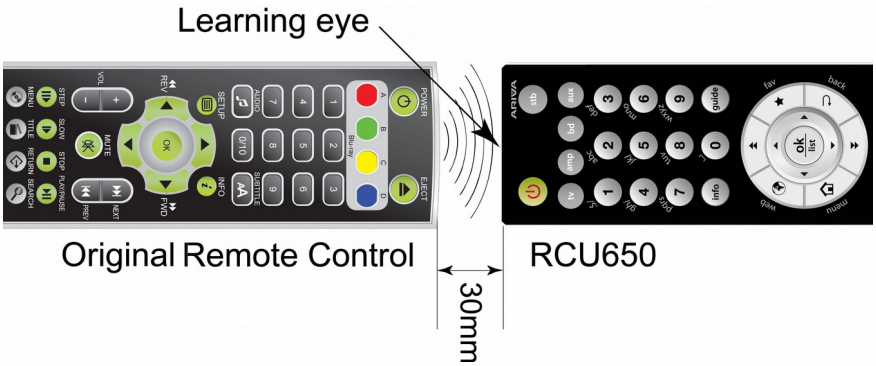
- If you are not satisfied with certain buttons assignments, or some functions are missing, then you can use additionaly learning function.
- Sometimes, remote control does not work properly just because manual search was not stopped in time. In this case, just enter into manual search again, and press **Vol–** button approx. every 1.5 seconds to search backward the code database.
- The Manual Search is automatically terminated if no entry occurs during 30 seconds period.
- Manual search mode, search forward from the current code.

Learning Function

The learning function is used to extend the pre-programmed codes. The standard code list already provides you with the most important functions, but it is possible to add a few additional functions. A fully functional original remote control is required for learning programming.

Please use fresh batteries for both the Learning Remote Control and the Original Remote Control.

1. Press down and hold the **device** button which you wanted to learn (e.g. BD player), and press **find** button at the same time, when LED turns on then release the both pressed keys, now remote control is in learning mode for BD codes.
2. Point the IR transmitter of the original remote control remotes face to the IR receiver of your RCU650 remote by approximately 30 mm apart. Keep two remotes at the same straight line to make the learning process more accurate.





3. Press and release the target button on your RCU650 remote control which you want to learn (e.g. **info**), the LED starts to flash.
4. Press the one button (For example, **info** button) from your original remote control, when you see LED on new universal remote control flashes three times and stop, it means RCU650 has accepted new code and now you can start to learn another new code from original remote.
5. Repeat step 3 to 4 to learn another code from original remote control.
6. When you finish learning all buttons you want to have, press **find** button to store all commands you have learnt from original remote and exit from Learning remote.

Note:

- You can learn limited set of buttons on RCU. Available buttons are shown on the image.
- When you can not choose any more buttons from new universal remote control for learning, it means new remote memory is full (RCU650 has limit for total 60 buttons).
- The learning mode is automatically terminated if no entry occurs during 14 seconds period.
- Press **TV** button and Number **6** button can delete all codes you have learnt for all devices.

Display device code

1. Press and hold the **device** button, simultaneously press button **1** to display the thousands of the 4-figure code, Count how often the LED flashes, if the LED does not flash, 1. then the number is zero.
2. Press and hold the **device** button, simultaneously press button **2** to display the hundreds of the 4-figure code.
3. Press and hold the **device** button, simultaneously press button **3** to display the tens of the 4-figure code.
4. Press and hold the **device** button, simultaneously press button **4** to display the ones of the 4-figure code.

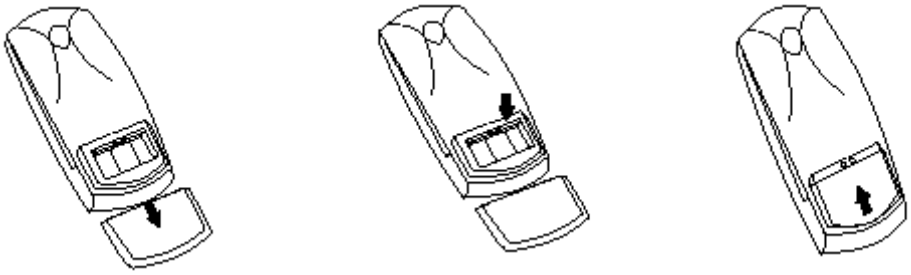
For example for code 0169 for TV:

1. Press TV and 1 LED flashes Zero time
2. Press TV and 2 LED flashes One time
3. Press TV and 3 LED flashes Six times
4. Press TV and 4 LED flashes Nine times

Reset / Delete Function

Just simply press **TV** button and Button **0** together, when LED flashes three times, now all settings will be deleted, and remote go back to factory default settings.

4.1 Installation of batteries



Remove the cover of the battery compartment on the rear panel of the remote control unit; slide it downwards and put it aside. Insert two AAA (R03) batteries into the compartment, observing the indicated polarity. **Do not mix old and new batteries, or batteries of different types.** Replace the battery compartment cover. Slide it upwards until it locks in place.

5. Front panel



**illustrative photo*

ARIVA	52E	102mini	102E 103	202E 203	150Combo 152Combo	250Combo 252Combo
POWER	-	-	✔	✔	✔	✔
▲ ▼	✔	-	✔	✔	✔	✔
◀ ▶	✔	-	✔	✔	✔	✔
OK	✔	-	✔	✔	✔	✔
MENU	✔	-	✔	✔	✔	✔
BACK	✔	-	✔	✔	✔	✔
CA	-	1	1	1	1	1
CI	-	-	-	1	-	1

CA: Socket for a subscriber's card – always insert with the chip facing down!

5.1. CAM module and subscriber's card

Inserting the module and subscriber's card

The conditional access module resembles a PC card (known as the PCMCIA) for laptop computers. There are different types of CI modules, suitable for various encoding systems.



1. First, turn off the receiver.

2. Insert the subscriber's card into the conditional access module.

3. Open the tab on the front panel and insert the CI CAM module, forcing it home into the socket on the right side of the front panel. If you want to remove the CAM module, press the black button next to the CAM socket.

4. After correctly inserting the module, turn on the receiver. From now on you will be able to watch coded television channels available through this module and card.

Note: *Check whether the subscriber's card has been correctly inserted into the module. Incorrect insertion of the card may cause damage to the conditional access module.*

Warning: *Do not attempt to remove or insert the module and/or card when the receiver is turned on!!!*

6. Rear panel

Depending on your receiver has inputs / outputs as shown below:

ARIVA	52E	102mini	102E / 103	202E / 203	150Combo 152Combo	250Combo 252Combo
LNB IN	✔	✔	✔ / ✔	✔ / ✔	✔	✔
LNB-OUT	-	-	✔ / ✔	✔ / -	✔	✔
ANT IN	-	-	- / -	- / -	✔	✔
LOOP-OUT	-	-	- / -	- / -	✔	✔
HDMI	✔	✔	✔ / ✔	✔ / ✔	✔	✔
LAN	-	✔	✔ / ✔	✔ / ✔	✔	✔
USB	1	1	1/2	2/2	2	2
SCART	✔	-	✔ / ✔	✔ / ✔	✔	✔
2x RCA analog audio	-	-	✔ / -	✔ / -	✔	✔
1 x RCA video (cvbs)	-	-	- / -	✔ / -	-	-
1 x SPDIF	✔	-	✔ / ✔	✔ / -	-	-
1 x OPTICAL	-	-	- / -	- / ✔	✔	✔
RS232	✔	✔	✔ / ✔	✔ / ✔	✔	✔
ON/OFF power button	-	-	✔ / -	✔ / -	✔	✔

7. Connecting the satellite antenna

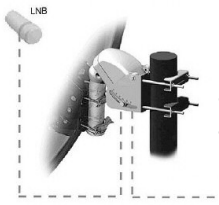
In order to check the correctness of connection of external equipment, for example a satellite antenna or converter, read the installation manual or hire a professional technician!

Good reception is conditional on the precise placement of the antenna. Even the best antenna will cause reception problems if it is incorrectly adjusted. Even slight placement errors may render reception impossible or considerably impair image/sound quality. Before installation make sure that the location is suitable. The proper direction may be initially determined by making a comparison with other antennas. There should be no objects directly in front of the antenna, for these may block the signal from reaching the bowl! Once you select an optimal location for the antenna, fix and adjust it initially, and then proceed to a precise adjustment. Each antenna is fitted with regulating screws that make it possible to correct its vertical and horizontal placement.

Adjusting is somewhat more difficult in the case of digital tuners. You cannot perform adjustments on the basis of the image, because this appears with a certain delay. What is more, the indicators available in the settings menu also act with a delay, and therefore adjustment may take considerable time and be very imprecise. An antenna signal meter will be indispensable for setting up the antenna. The meter must be connected to the antenna cable between the converter and the receiver. This will confirm the presence of a voltage that switches the converter from the tuner and show the signal strength for individual satellites. We strongly recommend hiring a professional technician!

7.1 Connecting an antenna system with a positioner

USALS type positioners manufactured by Stab will guarantee the correct operation of your Ferguson receiver. In order to connect an antenna system to a USALS positioner, you should connect the positioner out to the LNB IN of the Ferguson receiver. The role of the positioner installed between the mast and the antenna is to turn the bowl in such a way as to ensure that it is directed to various satellite positions.



The USALS function considerably simplifies configuration of the antenna. The Ferguson receiver requires that you enter the geographical coordinates of the antenna in order to automatically calculate the angle of revolution of the motor for individual satellites. The receiver activates the positioner automatically and turns the antenna to the selected satellite. When a signal is locked on, you should precisely adjust the antenna's elevation and azimuth settings in order to optimise signal reception. When correcting the azimuth, the entire antenna assembly and positioner revolve with respect to the mast. If initially the antenna was not directed precisely south, you can correct this now. When you have finished with the first satellite, all other satellites will be remembered automatically, provided that you have introduced their satellite position values correctly.

Without the USALS function, programming of the system is much more difficult. To this end you should use the DiSEqC 1.2 function, which turns the antenna to the selected satellite in a nearly identical manner. Since, however, it does not take into consideration the local geographical coordinates, the movement is effected on the basis of the prime meridian and the equator. Therefore it is necessary to introduce corrections separately for each satellite. Due to these difficulties, manufacturers of DiSEqC 1.2 positioners frequently provide useful software on their websites, using which you can easily calculate the location of the satellite.

8. Connecting the terrestrial antenna (Combo models only)

There are no special antennas for DVB-T. For collection of digital television, the same antennas as analog TV reception. There is no need to change the antenna system. It is worth to check the quality and condition of the plant, which has so far been used for analog TV reception. Reception problems can be weathered with old antenna systems, or grid antennas. It is recommended to use directional antennas with signal amplifier, depending on the particular situation you may also establish impedance transformer. Indoor antenna may be used only in areas with high signal intensity.

9. Connecting the receiver

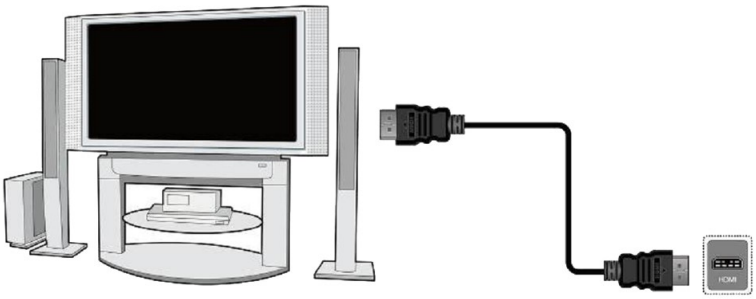
The following illustrations show cable connections for a television and other devices connected with the receiver. If you require any assistance in connecting individual devices, contact your local technician. Before connecting or altering cabling, disconnect the receiver from the mains !!!

Note: Availability and type of connection depends on your receiver model! Not all of the connections are applicable for your receiver!

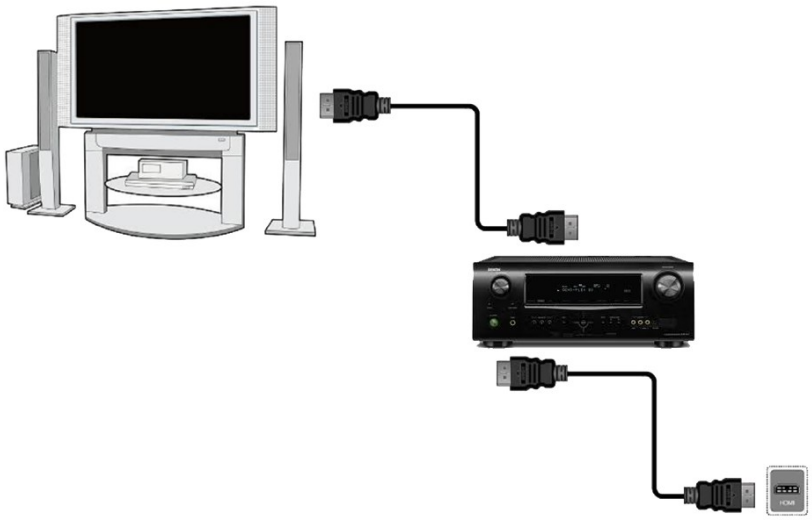
9.1 Connection by means of an HDMI cable (recommended)

1. Connect the antenna to the LNB IN socket of the receiver.
2. Connect the HDMI to the receiver out and the television in.

Connection by means of an HDMI cable allows you to obtain the highest image quality.



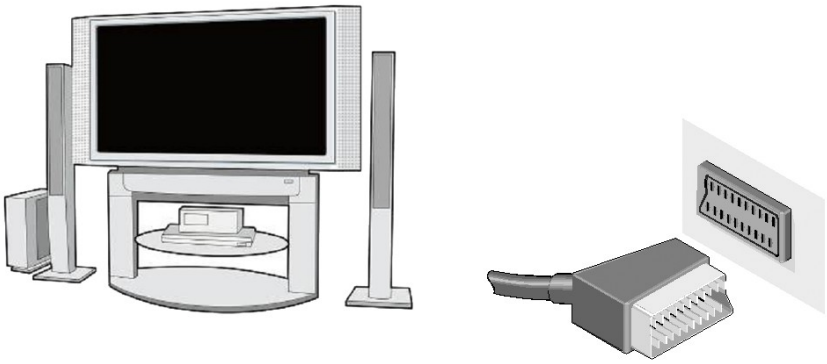
If you have an amplifier with an HDMI out and in, which supports sound sent over HDMI, connect the devices by two HDMI cables. As in the following figure: one cable to the amplifier, and the other from the amplifier to the television set.



9.2 Connection by means of SCART cables

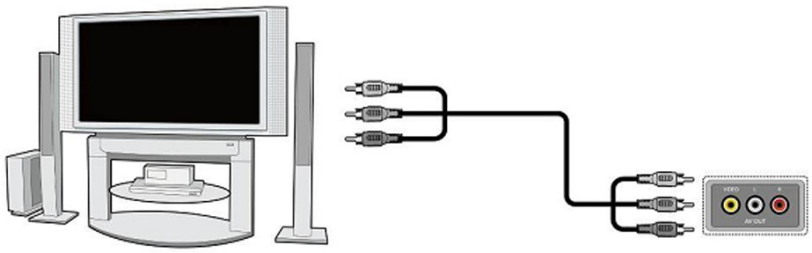
1. Connect the antenna to the LBN IN socket of the receiver.

2.Connect the television to the port in accordance with the description. We recommend using shielded SCART cables.



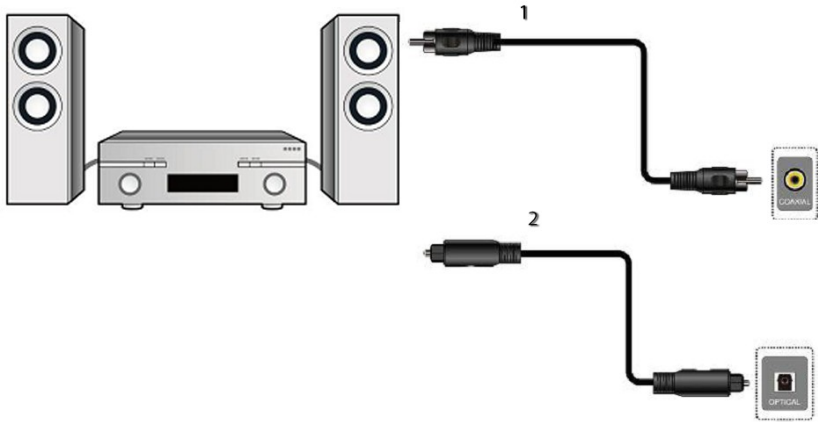
9.3 Connect composite port

1. Connect LNB IN port on a receiver to a satellite dish.
2. Connect the video and audio by means of three cinch cables to the television set. One cable, colored yellow used to send video. The two remaining cable, red and white, are used to connect sound (right and left channel).



9.4 Connection of an audio system

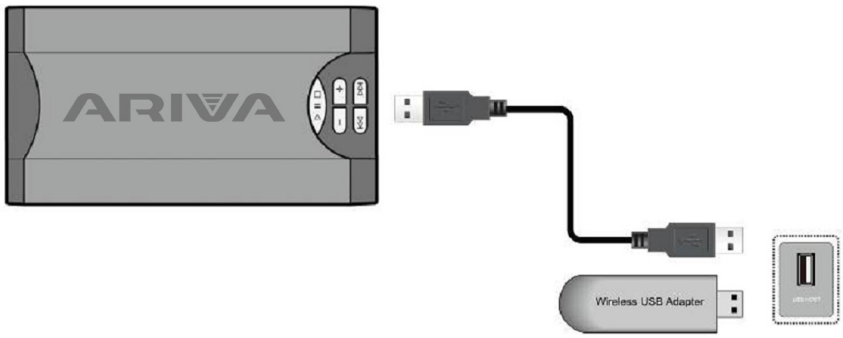
- Digital sound (including surround sound, if broadcast) can be obtained from two sockets: coaxial (1) or optical SPDIF (2).
- Stereo sound may be obtained by connecting cinch cables (white and red) for the left and right channels



9.5 Connection of an external memory

1. The receiver supports all types of hard disk drives in housings that are equipped with an independent power supply. The sole condition is that the hard disk has to have a single basic partition that is formatted in the NTSF (recommended) or FAT32 system.

2.We recommend that you regularly archive data on your PC computer. A large number of files with recordings may slow down cooperation with the receiver (slow loading of the file list).

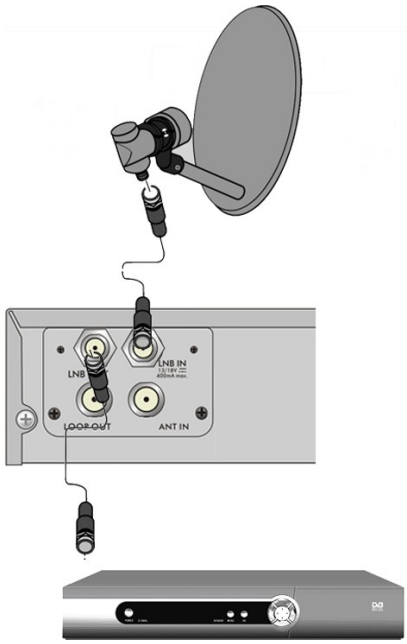




WiFi is supported only when plugged into the USB port is free WiFi USB adapter based on Ralink chipset Rt5370. Available as a separate accessory.

9.6 Connection of another receiver

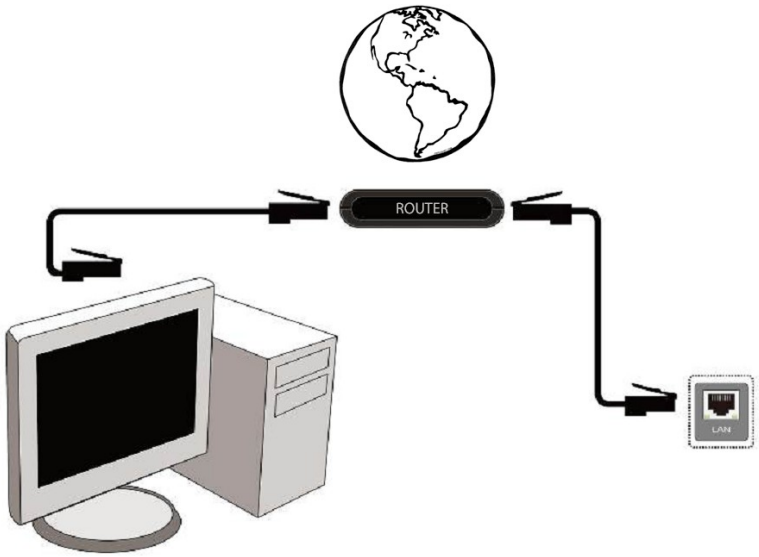
Another receiver may be connected through the LNB OUT socket. Please keep in mind, however, that only one device may be used at one time! Permanent damage may result if both are turned on simultaneously.



NOTE: *LOOP OUT in all Combo receivers is the only signal loop-through. This is not a modulator, so the receiver will not let go of the image decoding (DVB-T and USB) in the form of an analog signal on this connector.*

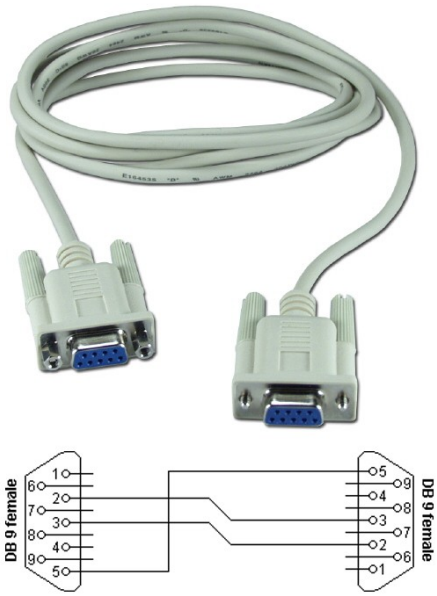
9.7 Connection to the LAN local network

In order to connect the receiver to a local network, use an RJ45 cable. We recommend that you restart the receiver whenever the network settings are changed.

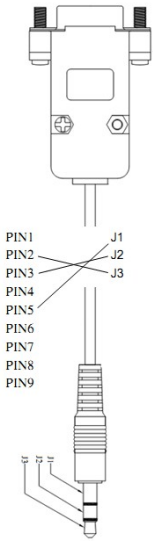


9.8 Connection to the computer by means of an RS232 Null Modem cable

For connection to a computer, use a Null Modem cable.



Ariva 52E
Ariva 102 mini
Ariva 103
Ariva 203



FIRST STEPS

1. Insert the plug of the receiver and other additional devices to a wall socket.
2. Select AV signal source of your television set.
3. The satellite receiver is supplied with reinstalled television channels. In order to watch other, i.e. non-default channels, you should use channel search function.

Note: *check all of the connections, i.e. antenna cables, audio and video signal cables, before connecting the receiver to the mains!*

INFORMATION ABOUT THE USER MENU

The user interface allows you to use numerous settings and receiver functions. Some buttons on the remote control unit enable direct access to functions of the device. Certain of these buttons have been described, for example Guide, MENU, OK, or coloured for ease of usage. Other buttons are multi-functional and their operation depends on the type of device selected by the user. Hereunder we have presented a brief description of how to use certain device functions available through the user menu.

1. The up/down arrow keys on the remote control are used to move the cursor up and down on the menu.
2. The left/right arrow keys on the remote control are used to move the cursor left and right, and to switch on submenus
3. The OK button is used to enter submenus.
4. The BACK button is used to exit menus or functions.
5. When using a submenu, the OK button is used to confirm your selection; a green background informs that a function is active.

10. Main menu

Press the MENU button on the remote control in order to display the following main menu, which contains six items:



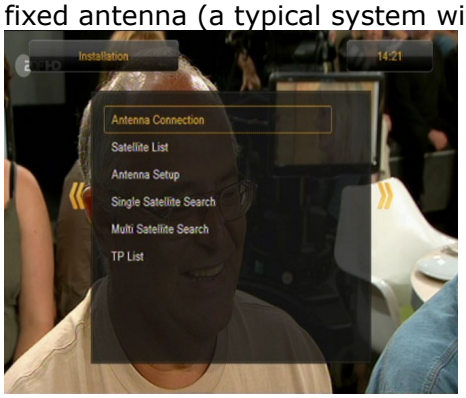
1. editing channel lists
2. installation
3. system settings
4. tools
5. entertainment
6. recording settings

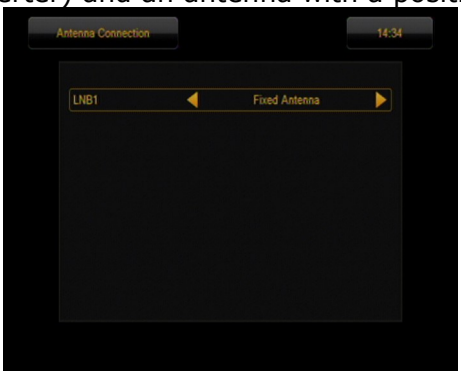
11. Installation

The installation menu is used to set antenna installation parameters and to search for channels on a satellite.

11.1 Antenna connection

Select one of the two available options, depending on your system. Two options are available: a fixed antenna (a typical system with a single converter) and an antenna with a positioner.

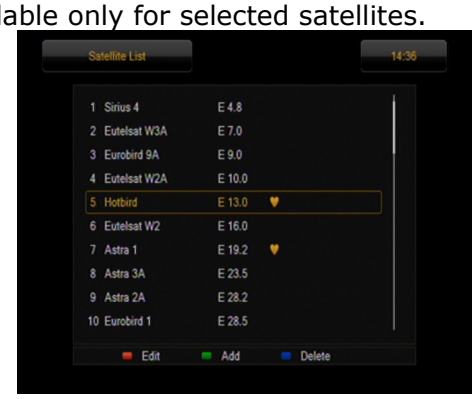




11.2 Satellite list

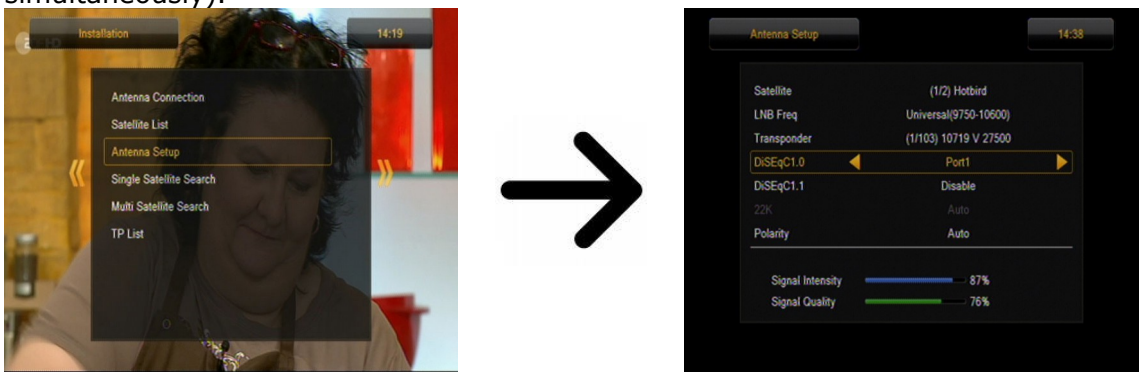
In this menu select the satellites that you want to use. Select a satellite by pressing the up/down arrow keys. Mark by pressing OK. Each selected satellite will be accompanied by the ♥ symbol. The remaining menu options will be available only for selected satellites.





11.3 Antenna setup

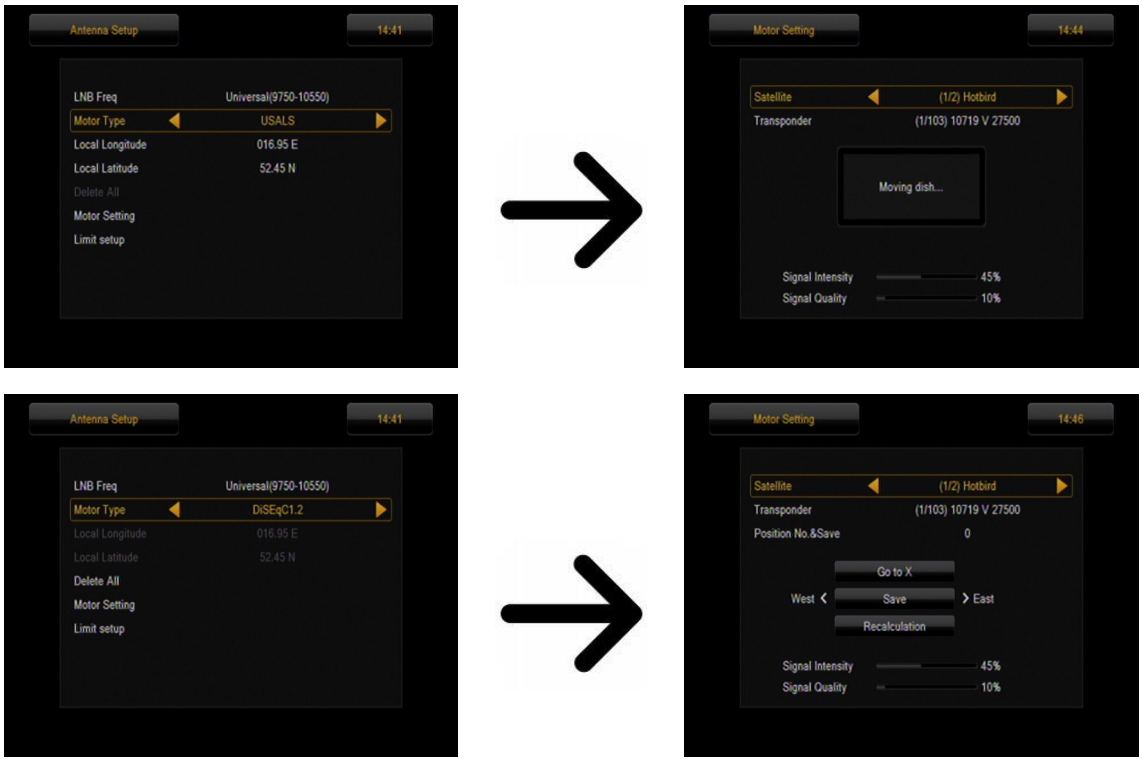
This menu is used to set detailed operating parameters for previously selected satellites, depending on your antenna system. Select a satellite by pressing the left/right arrow keys. Only satellites marked on the list of satellites will be available. Now select the converter type (usually, you do not have to change this option and may leave it set to "universal"). Next, if you have a switch for more than one satellite, set the required port. Depending on the type of switch, these will be options for DiSEqC 1.0 or DiSEqC 1.1 (do not activate these two options simultaneously).



The correct setting of the antenna is indicated by bars presenting the strength and quality of the signal. Both should indicate more than 80% for channel reception to be free of interference. In order to check the strength and quality settings, use the "transponder" option in order to alter the frequency and verify whether each V and H polarization is operative.

Confirm the settings by pressing BACK.

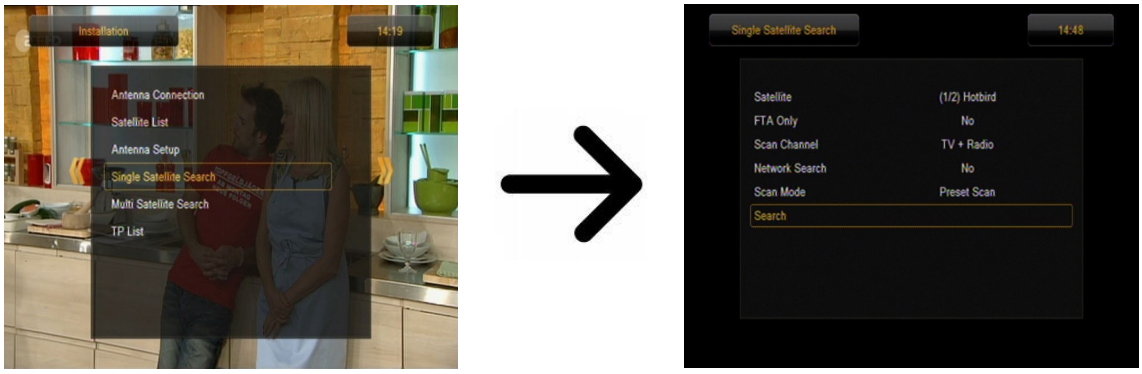
If as the antenna connection you have selected: antenna with positioner, the antenna settings menu will have a different appearance. Two operating standards will be available for the positioner: USALS or DiSEqC 1.2. We recommend using USALS positioners, for which only the correct longitude and latitude must be given.



11.4 Single satellite search

In this menu you can search for channels from one selected satellite. To this end, select a satellite by pressing the left/right arrow keys. Only satellites marked on the list of satellites will be available. Next, select whether you want to search only for free to air channels or for all channels, or for radio channels, television channels, or all channels.
Three search modes are available:

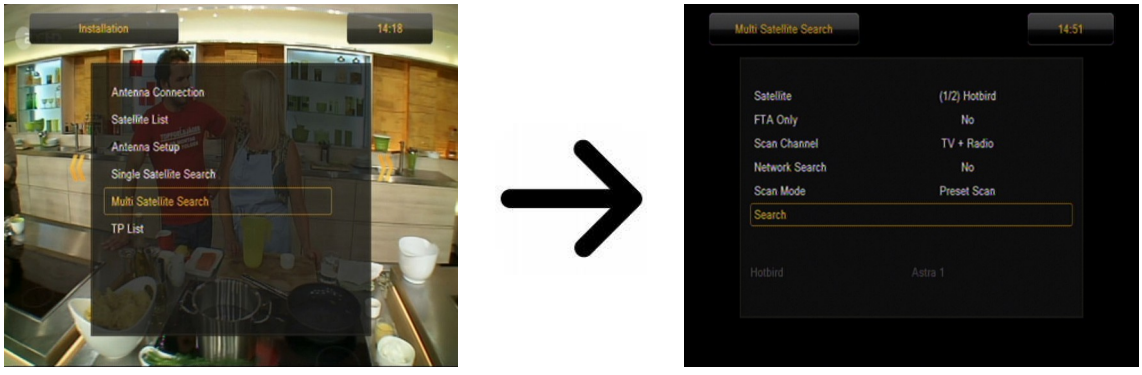
1. Auto scan – a so-called blind scan, which consists in an automatic search for available satellite frequencies, which are then scanned in turn.
2. Preset scan – according to the TP list – the receiver searches through only frequency by frequency, in accordance with a list recorded for the selected satellite. This list may be edited in a separate menu.
3. FastScan - receiver scans the channels of the selected provider bucket. You can add channels to an existing list or replace an existing list. Please note that the search result and working of this function depends solely on the provider.





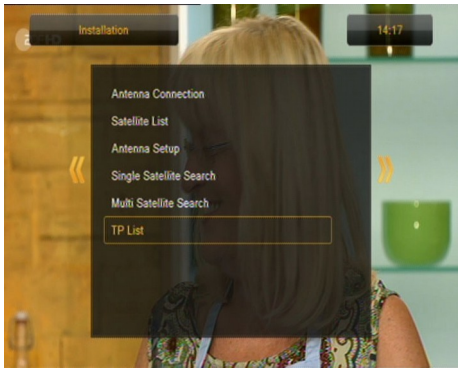
11.5 Multi satellite search

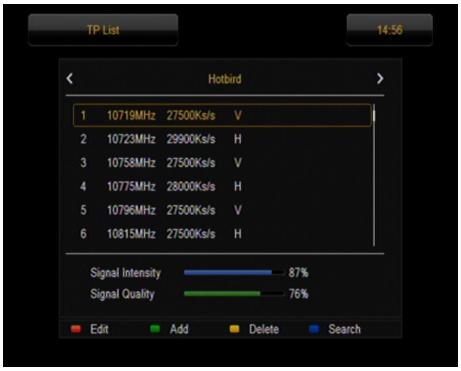
In this menu you can search for channels from a few satellites. The satellites will be searched automatically one after another in the order in which they were entered in the list of satellites. Options concerning settings and search functions are the same as in the menu: search one satellite. The names of satellites that are to be searched are visible in the lower part of the window.



11.6 List of transponders

Channels on satellites are located in "sets". Such a "set" of channels comprises a transponder. A list of transponders is a list of frequencies available on a given satellite. In this menu you can edit, add and remove individual frequencies. Select a satellite by pressing the left/right arrow keys, and the desired frequency using the up/down arrow keys.

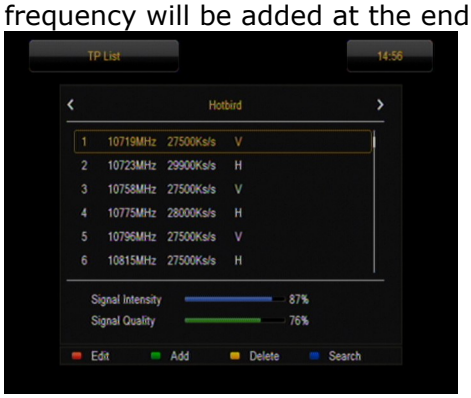


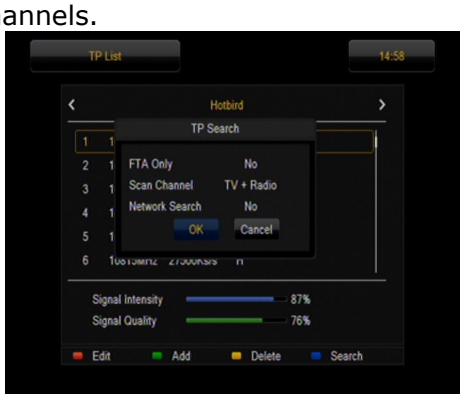


How do I search for a new channel?

In order to search for a new channel, you must know the basic channel parameter, i.e. the frequency on which it is broadcast. This parameter may be obtained from the broadcaster, on the internet, in the press, etc.

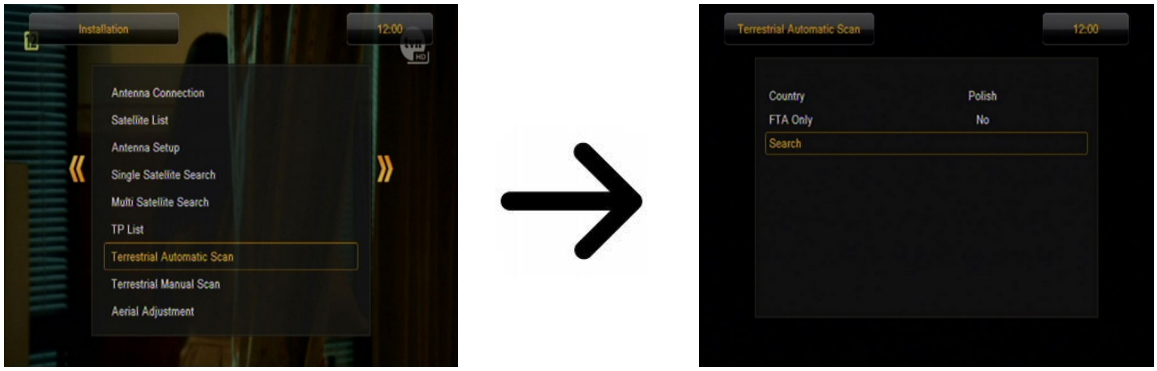
Next proceed to the list of transponders, select a satellite and choose the desired frequency (if it is not on the list, use the function: add – green button on the remote control unit). Now click OK for the selected frequency or the blue button on the remote control, in order to call out the window for searching this frequency. Use the up/down buttons to change search options and confirm by means of the OK button. A search will be started. Newly found channels from this frequency will be added at the end of the list of channels.





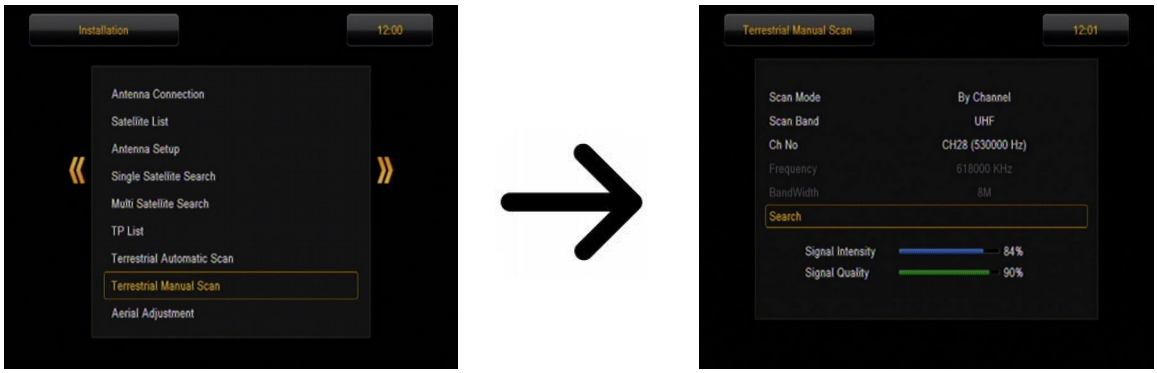
11.7 Terrestrial Automatic Scan (Combo models only)

In this menu, you can search for channels automatically - the receiver searches only frequency by frequency according to the saved list of DVB-T. This list can not be edited in a separate menu.



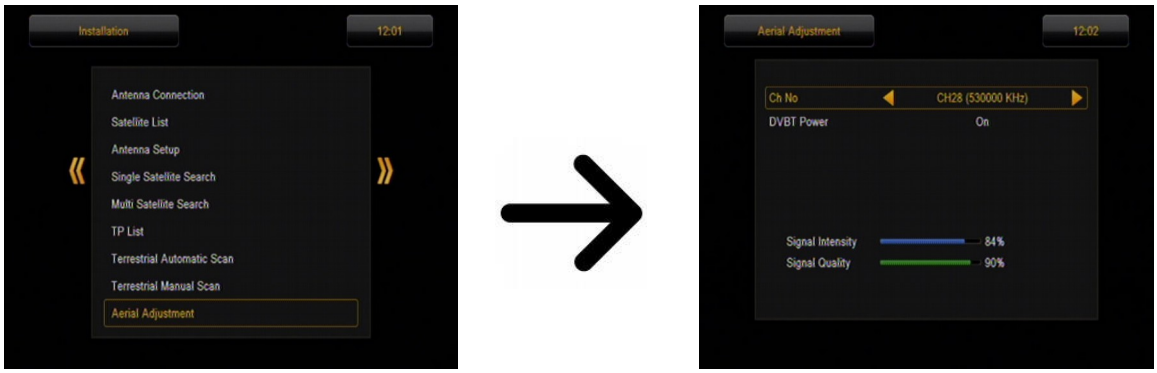
11.8 Terrestrial Manual Scan (Combo models only)

There are two search options manually. Choose the right depending on whether we know the channel or frequency with which it is assigned a channel search.



11.9 Aerial Adjustment (Combo models only)

In this menu, set the detailed parameters of the terrestrial antenna. By setting or fixing the antenna you should remember that the signal bars appear with a delay!

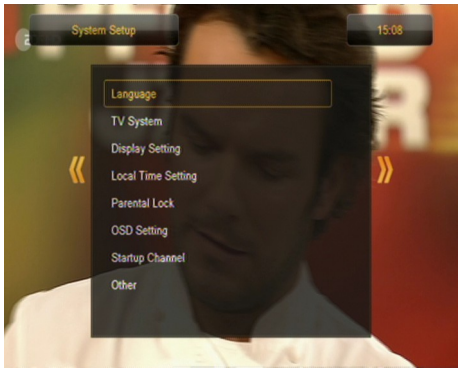


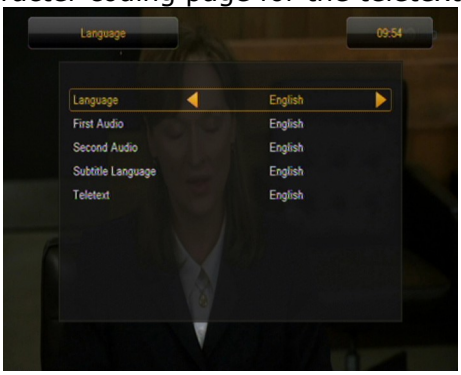
The correct setting of the antenna is indicated by bars presenting the strength and quality of the signal. Both should indicate more than 80% for channel reception to be free of interference.

12. System settings

12.1 Language

This menu is used to define the language in which the receiver's menu is displayed. The preferred and second language options refer to audio soundtracks. If a given channel supports more than one audio soundtrack, the receiver will by default search for soundtracks in the selected languages in this order. The language of subtitled – as in the case of audio soundtracks, this determines the language of subtitles to be used, provided that such subtitles are available and active. Teletext - defines the character coding page for the teletext.





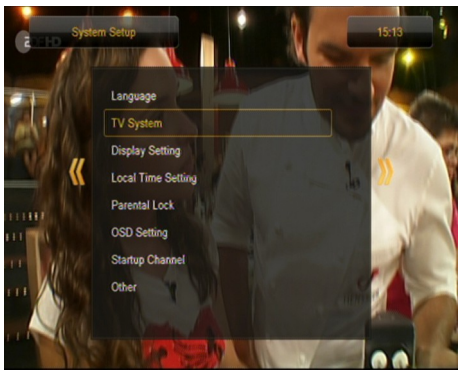
12.2 TV System

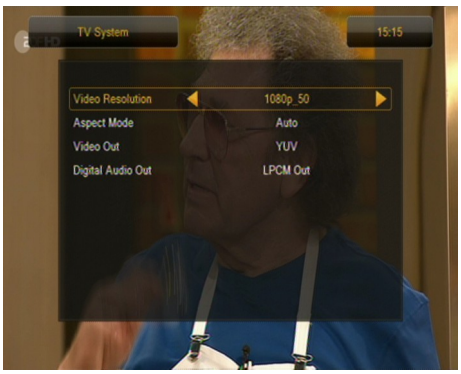
This menu is used to set the image parameters. Above all, you should determine the resolution of the image sent over the HDMI connection. Select the highest possible resolution supported by your HD television set in order to obtain the best image quality. The following resolutions are available: 480i, 480p, 576i, 576p, 720p (50Hz), 720p (60Hz), 1080i (50Hz), 1080i (60Hz), 1080p (50Hz), 1080p (60Hz). If you select an unsupported resolution, your image will be lost or become illegible – you can always use the **F3** key to return to the basic resolution, i.e. 576i.

If you are using a component cable connection, then for the majority of television sets we recommend a resolution of 720p (50Hz) or 720p (60Hz), depending on your television set, and the YUV video out. *Note:* if you change the video out to RGB, no video signal will be output over the component connection!

If you are using a SCART connection, then for the majority of older television sets we recommend setting the video out to YUV. If your television supports RGB, then activate this option in order to obtain better image quality over the SCART connection.

Additionally, in this menu you can choose the format in which the receiver will send sound over the digital connections. We recommend using LPCM in order to also receive a stereophonic signal over the digital connections.





12.3 Display setting

This menu is used to adjust the image displayed by the receiver. You can change the brightness, contrast and colour saturation. By default, all of these values are set to 50.

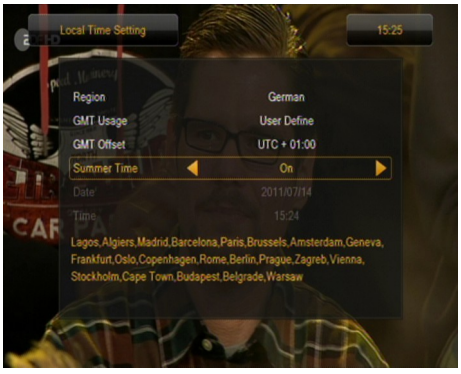




12.4 Local time settings

This menu is used to set the time and date. The receiver can automatically download the time and date from the satellite (recommended), or you may set the time and date manually. If you are using GMT, you should select the correct time shift value (for example +1 hour for Poland) and turn on or off the summer time, depending on the time of year. The manual editing of the time and date is effected by means of the numerical buttons.

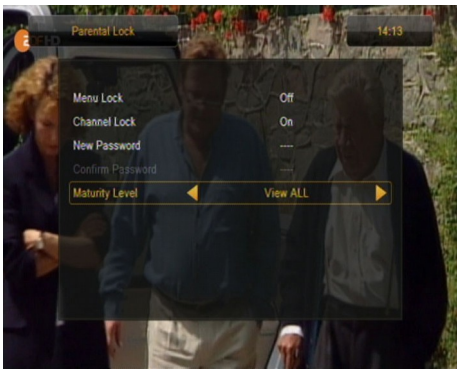




12.5 Parental lock

In this menu you may specify whether the receiver is to use a parental block or not. In addition, you can turn on or off the password protection function for selected menu options and change the default password. The default password is four zeros: **0000**.





12.6 OSD settings

In this menu you can define the basic parameters of the on-screen menu (OSD). The first option concerns support for the subtitles. If the subtitles are turned on, the receiver will display them for channels that transmit such subtitles. By default, they are displayed in the language specified in the language selection menu for the subtitles. Another option determines the time for which information bars will be displayed; the default setting is 5 seconds. In addition, you can specify the transparency of the menu to suit your preference.





12.7 Startup channel

In this menu you can specify the television or radio channel to which the receiver will be switched on. This function is switched off by default, and this means that the receiver will switch to the channel on which it was turned off.





12.8 Other

In this menu you can change the remaining options, such as the power supply of the tuners, select the types of channels played, and how the receiver is to behave when switching channels.





Clock In Standby enables or disables the clock on the front panel display in standby mode.

Note: *only if the clock in standby mode is off the receiver draws less than 1W of energy!!!*

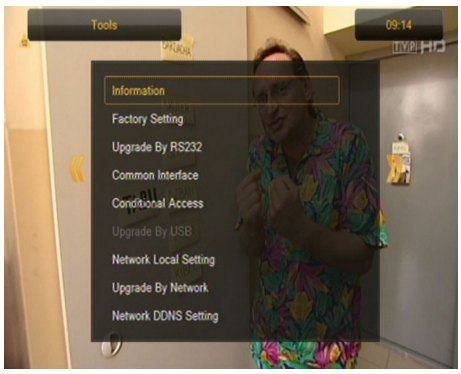
Radio Equalizer enables or disables the audio graphic equalizer display while listening to radio stations.

Auto Standby run this option will automatically turn off the receiver after 3 hours of inactivity.

13. Tools

13.1 Information

In this menu you can obtain detailed information about your software version. The software structure is divided into a number of independent databases. The most important of these from the point of view of the user is the **userdb**, which archives current settings and channel lists. The receiver's software version is a symbol placed next to **maincode**.

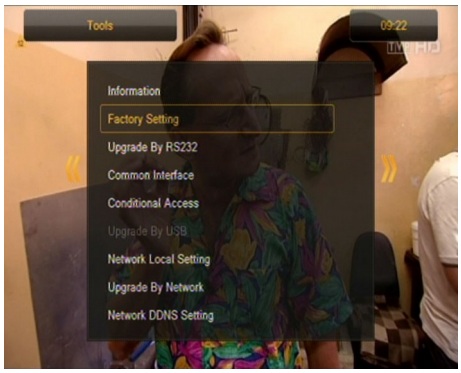




13.2 Factory settings

In this menu you can restore the default settings of the receiver.

Note: *Restoration of default settings results in the removal of all user settings and the recall of a default channel list; in some cases, no channel list will be available. All changes introduced by the user, including the channel list and configuration of satellite antenna settings, will be removed!!!*





13.3 Updating by RS232

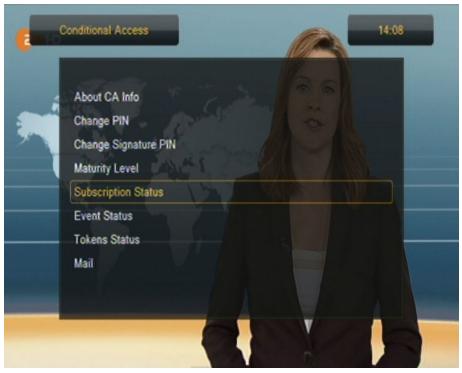


This menu allows you to send software, settings or channel lists from one receiver to another receiver of the same type. Connect the receivers using an RS232 Null Modem cable. Select **allcode** in order to send all of the software, or **userdb** to send only current settings and the channel list.

13.4 Conditional access

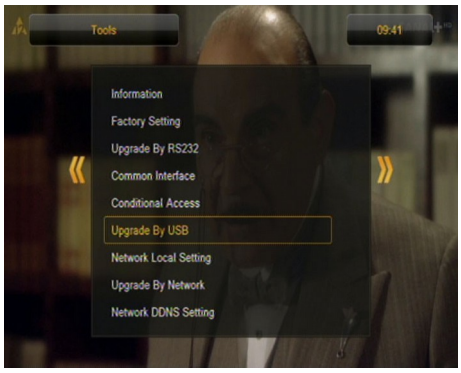
In this menu you can obtain additional information about the subscriber's card in the card reader. The information presented depends on the type and version of your card.





13.5 Upgrade by USB

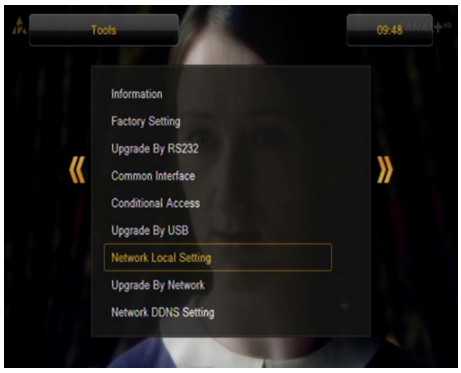
This menu is used to update the receiver. The latest software is available on the manufacturer's website. The downloaded file needs to be unpacked and recorded to an external USB memory device. Next, select it by means of the LEFT/RIGHT buttons and press start in order to commence the update.

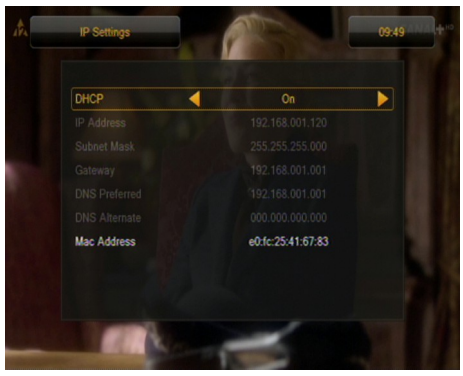




13.6 Local network settings

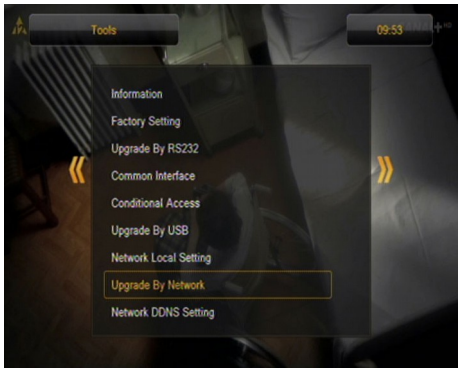
This menu serves to configure addresses and DNS servers. These options concern the Ethernet port, which enables the exchange of data over the network.

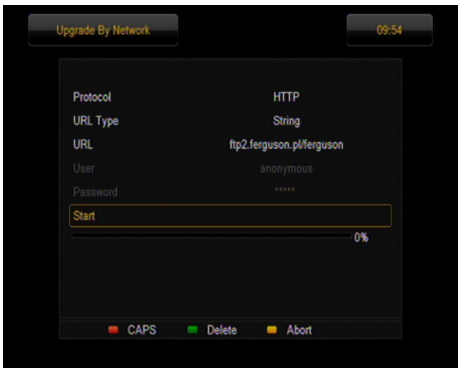




13.7 Upgrade by network

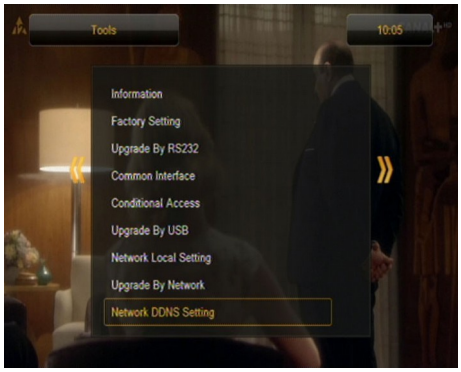
The receiver allows you to update software over the Internet. Detailed information about current connection parameters can be found on the manufacturer's website.





13.8 Network DDNS Setting

A popular application of dynamic DNS is to provide a residential user's Internet gateway that has a variable, often changing, IP address with a well known hostname resolvable through standard DNS queries.

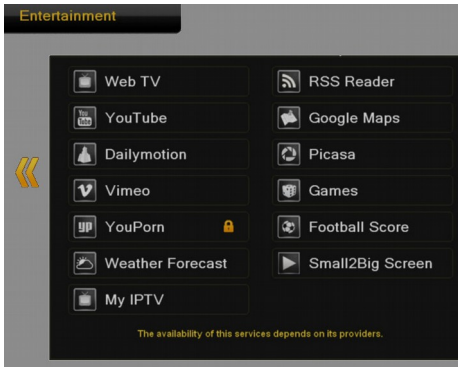




14. Entertainment

The receiver allows access to certain network services and embedded games.

- Tetris (classic arranging of successive levels using blocks of various shapes).
- Othello (a logical game, which consists in the placement of your colour on a board and changing your opponent's colour; the person whose colour dominates, wins).
- Sudoku (the game consists in completing diagrams with numbers from 1 to 9 in such a way that each column and each line contains each number from 1 to 9).





The availability of these services depends on their suppliers. The manufacturer is not responsible for any lack of access to additional functionality.

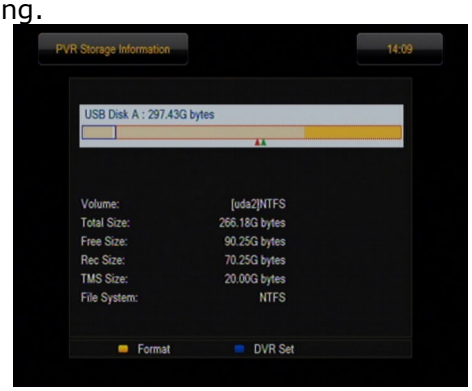
15. PVR – recording configuration

15.1 Storage info

This menu displays basic information about the connected USB memory device. An additional option allows you to format the memory device. Press the yellow button in order to select the file system in which the device is to be formatted. Two options are available: FAT and NTFS. Both file systems are supported correctly, however due to the lack of limitations regarding the size of written files and greater reliability, we recommend using the NTFS system.

DVRSet - to set the partition to be used for recording.





15.2 DVR configuration

In this menu you can adapt preferences concerning recording to an external USB memory device. In the first option you decide whether you want to use the time shift option. This mode makes it possible to stop the current transmission at any moment by pressing the **PAUSE** button and resume it after a break by pressing the **PLAY** button.
Another option allows you to switch on or off the buffering of data gathered by the TimeShift function. This means that once you press the **REC** button, the contents of the buffer will be recorded and the recording shall be continued. This option is inactive by default, which means that once you press the **REC** button, the receiver will start recording from that moment on.





In this menu you can also determine the type of recorded files. All data are recorded in TS (transport stream) format or in an abbreviated version, with only the default sound and video in PS (program stream) format. We recommend using the TS format, which records the audio soundtracks, video, subtitles and teletext.

The "Jump" option concerns the playback of recordings. It defines the time of rapid movement by means of they ⏶ / ⏷ forward/back keys, respectively, during playback.

Duration - the default duration of the manual recording.

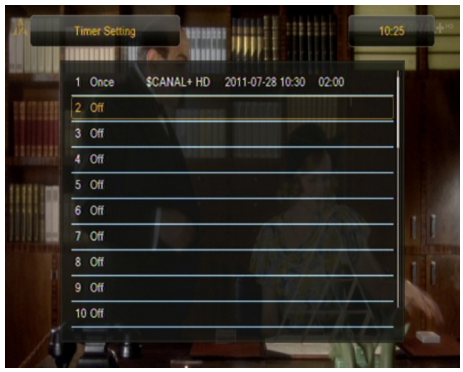
After the Timer Record - the behavior of the receiver after recording a scheduled event.

Recordings are automatically split the recording and combined automatically during playback. The "TS file size" specifies the amount of data, after which the recording is split.

15.3 Timer settings

This menu serves to programme up to 32 different events. Events enable the automatic switching on and off of the receiver to a previously planned programme.





Select the event that you want to programme and press OK. Set the timer activation frequency. Select the channel (press OK to display the simplified channel list). Next set the date, start time and duration. Select 'record' to return to the events list. A new item has been added.



15.4 Media Player

The receiver is equipped with a simple multimedia player. You can use it to listen to music, watch photographs and films, and - first and foremost - play back recordings. The player is available through a menu option or directly, by pressing the **PVR** button.

Music



In this tab you can support a number of popular formats of music files, such as MP3, FLAC or OGG. There are a few additional functions that can be operated by means of the functional keys described in the lower part of the screen.

Photos

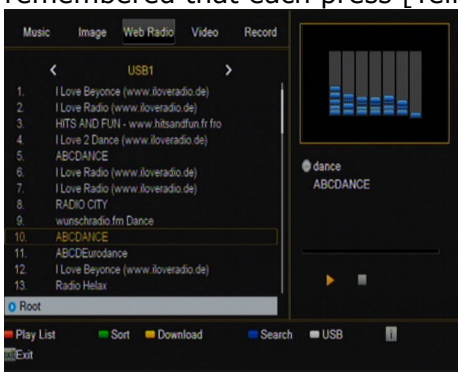


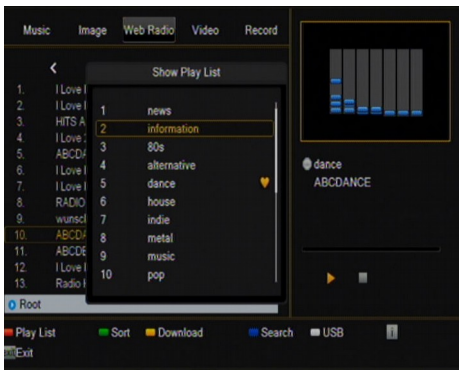
In this tab, you can view photographs in JPEG, BMP format. There are a few additional functions that can be operated by means of the functional keys described in the lower part of the screen.

When viewing photographs, you may listen to music. To this end, activate the playback of music files and pass to the photograph tab using the LEFT/RIGHT buttons.

Web radio

The receiver support system for receiving audio in the form of a data stream - the so-called Internet Radio. This feature works only with a properly configured connection to the Internet. Press [Yellow] button to get a current list of radio stations in chosen category. Categories can be changed by selecting [Red] button. Files with lists of each category are saved on connected USB memory. They can be freely modified thus creating your own lists of radio stations. It should be remembered that each press [Yellow] button will overwrite selected list file.





Internet radio playback depends on network connection speed and stability. Note that some of the servers can be full when trying to access them, in this case radio will not be played. The maximum number of simultaneous listeners allowed depend on server settings.

Video



In this tab, you can play back movie files. Also high resolution files can also be played back.

Recognized multimedia file extensions are listed below.

Not all files with those extensions are playable - some files may include not supported codecs and/or settings.

Video files containers: AVI, MKV, MPEG, MPG, M2TS, VOB, TS, TRP, MP4, DVR (default record format)

|
|-> video codec supported in containers: mpeg2, XVID, H.264 (up to 8 RF)
|-> audio codec supported in containers: MP3, AC3

C A U T I O N !!!

- Playback of some files may fail or be incorrect.
- Copy protected content is not playable.
- Playback may suffer temporary interruptions (image freeze, faster/slower playback, etc) when the audio language (audio track) is changed.
- A damaged movie file may not be played correctly.
- Videos with resolution higher than 1920x1080@25/30P or 1280x720@50/60P may not work properly.
- We do not guarantee smooth playback of movies encoded in profiles level 4.1 or higher in H.264.
- Playback of movie files with video bitrate over 30 Mbps may be incorrect.

Recordings



This tab is used to play back recordings made using the receiver. Each recording may be blocked by a password, deleted, or its name changed.

Options available during playback (subtitles, teletext, audio soundtracks) depend on the selected recording format!!!

During playback, press the INFO button in order to display the information bar. There are a few different methods of quick viewing/scrolling a recording:

1. Use the Fast forward and Rewind buttons to navigate within a current recording and press the PLAY button in order to start viewing from a selected moment.

2. You can set the red cursor by means of the LEFT/RIGHT buttons and confirm with OK in order to start viewing from a selected moment.

3. Another method consists in moving by means of the ⏫ / ⏬ keys. Scrolling is effected by the number of minutes defined in the DVR configuration menu. Keep in mind that this function is available only when the time of the recording exceeds the selected scroll time.

4. Another option of quick scrolling a recording is based on usage of the numerical keys. This results in scrolling in accordance with the value applied, i.e. 4 in order to pass to 40% of the recording, 5 in order to pass to 50% of the recording, etc.

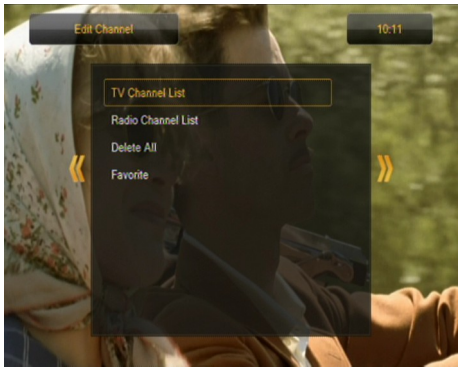
15.5 Safe removal of a USB device

This function allows you to rapidly and, what is most important, safely remove any USB memory device connected to the receiver. In the case of flash memories or portable disks, this prevents the loss of data when disconnecting the USB memory device. Always use this option before disconnecting a USB memory device!

16. Edit channels

16.1 TV channels list

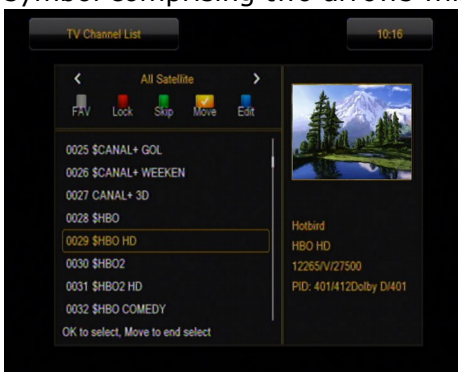
In this menu you can edit the list of television channels. Editing is effected by means of the coloured buttons on the remote control unit. The raised colour function is active - select OK on the selected channel in order to use it. BACK, in order to save.





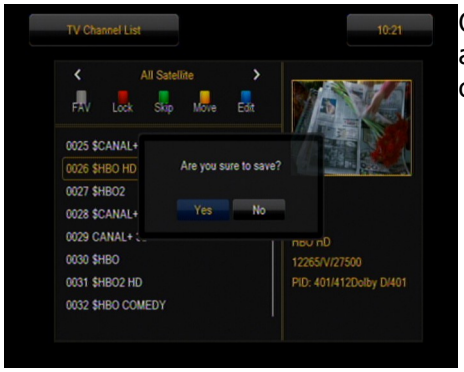
How do I move a channel?

Proceed to the editing of channel lists. Select a channel and press OK in order to see a preview in a small window. Press the yellow button in order to turn on the channel movement function and then once again press OK on the selected channel (you can select multiple channels). A symbol comprising two arrows will appear next to the channel name.





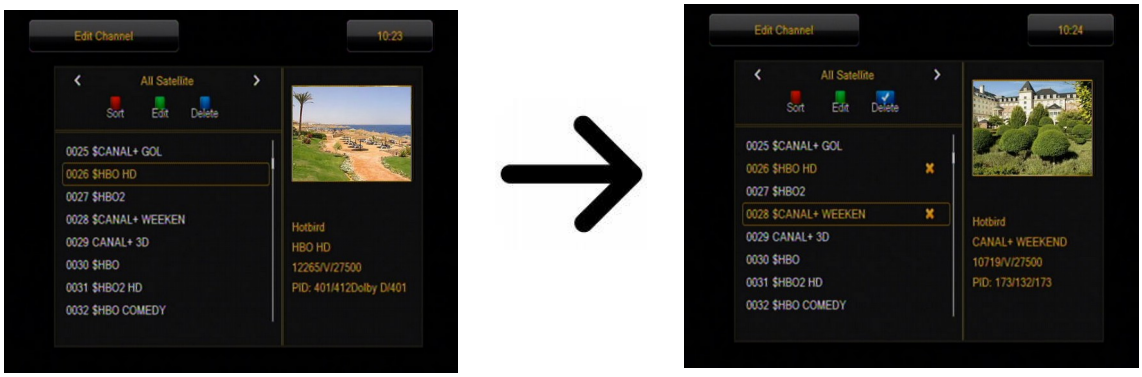
Press [Yellow] button and use the up / down arrows move the cursor to the desired position. Press OK to confirm the move. Next press the yellow button again in order to switch off the channel movement function.



Once you are finished, press BACK. A message will appear asking you to confirm the changes made. If you fail to do this, changes in the channel list will not be saved.

How do I delete a channel?

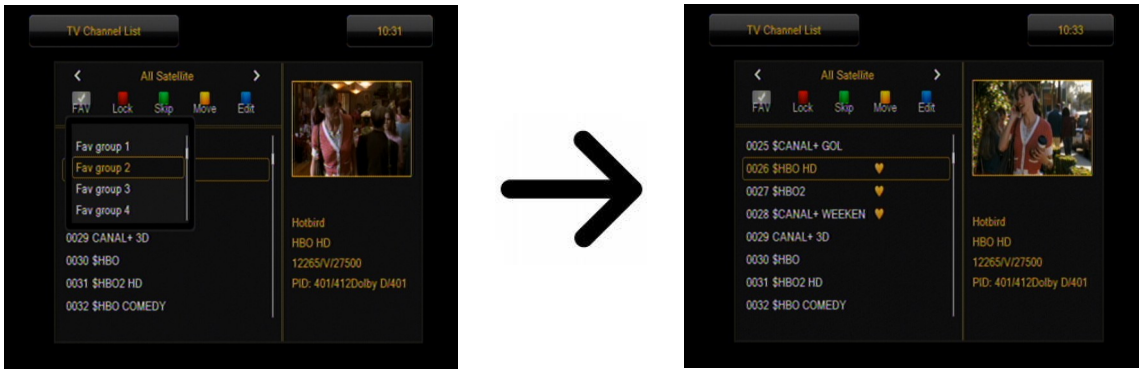
Proceed to the editing of channel lists. Select a channel and press OK in order to see a preview in a small window. Press the blue button in order to pass to the channel edition menu. Press the blue button in order to switch on the channel delete function and OK on the channel that you want to remove. The symbol **X** will appear next to the channel name.



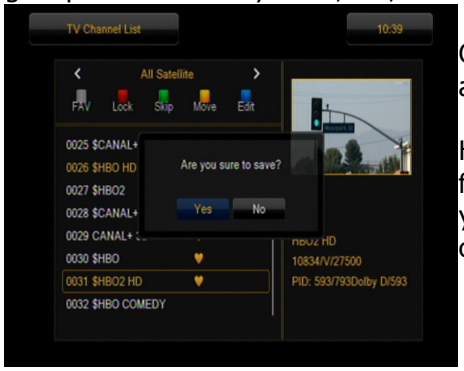
Next press the blue button again in order to switch off the channel delete function. In this way you can mark one or more channels that you want to delete with the **X** symbol. Once you are finished, press **BACK**. A message will appear asking you to confirm the changes made. If you do not do this, the channel(s) will not be deleted.

How do I add to the group of favourites?

Proceed to the editing of channel lists. Select a channel and press OK in order to see a preview in a small window. Press the FAV button in order to switch on the add-to-favourite-groups function. A window will appear with a list of favourite groups (names of favourite groups are changed in a separate menu).



Use the up/down arrows to select the group to which the selected channel is to be added. Next press OK to confirm. Select a channel and press OK on this channel in order to add it to the group. The heart symbol, ♥, will appear next to the channel name.

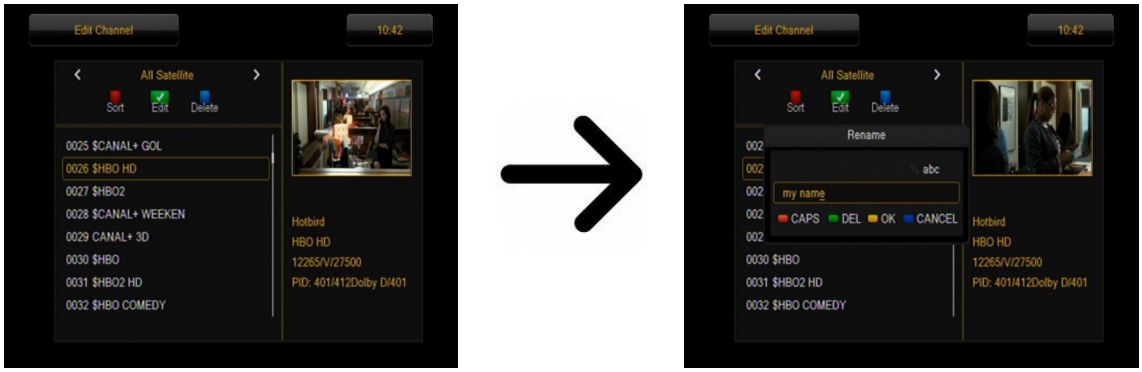


Once you are finished, press FAV in order to switch off the add-to-favourite-groups function.

Having completed the addition of channels to successive favourite groups, press BACK. A message will appear asking you to confirm the changes made. If you fail to do it, the changes made will not be saved!

How do I change a channel name?

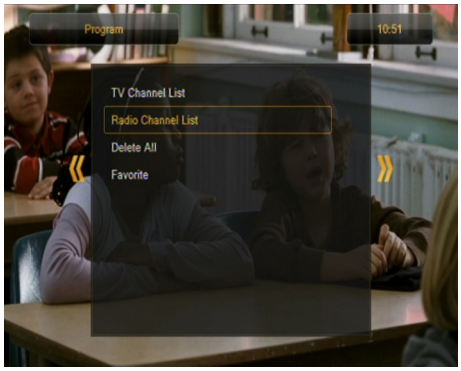
Proceed to the editing of channel lists. Select a channel and press OK in order to see a preview in a small window. Press the blue button in order to pass to the channel edition menu. Press the green button in order to switch on the channel name change function. Use the numerical keyboard in order to change the channel name.

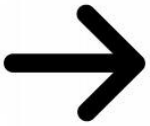


Confirm the new name by pressing the yellow button. Next press the green button again to switch off the channel name change function. In this way you can change the name of one or more channels. Once you are finished, press BACK. A message will appear asking you to confirm the changes made. If you fail to do it, the changes made will not be saved!

16.2 Radio channel list

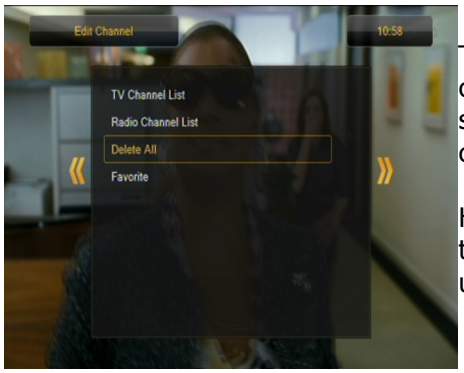
In this menu you can edit the list of radio channels. Editing is effected by means of the coloured buttons on the remote control unit. The raised colour function is active - select OK on the selected channel in order to use it. BACK, in order to save.







16.3 Delete all

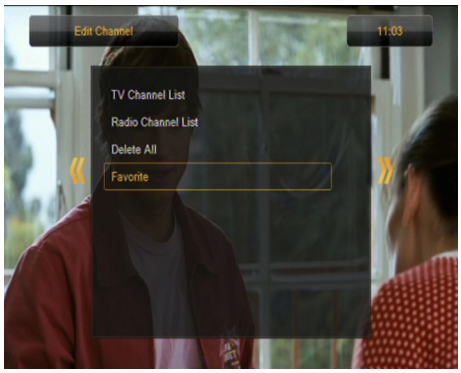


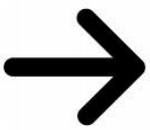
This option allows you to remove all channels from the channel list. Note: This operation cannot be reversed! Make sure that you are certain that you want to remove all of the channels?

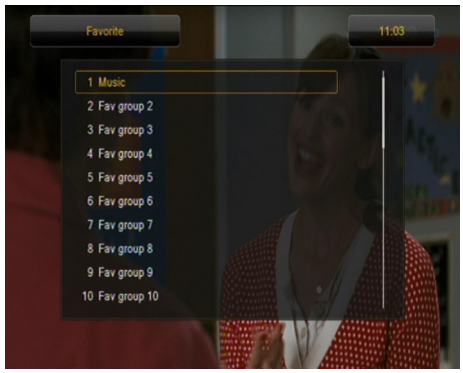
Having selected this option, you should wait a while for all of the options available for the channel list to be highlighted as unavailable.

16.4 Favorite

The receiver allows you to define up to 32 different groups of favourite channels. In this menu you can change the names of all of them.

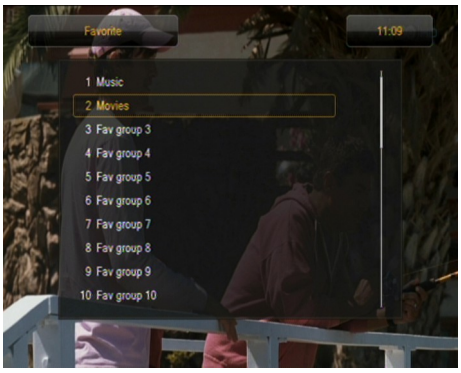






In order to change a name, select the favourites group and press OK. Next use the numerical and coloured buttons to input the name. Confirm the changes by pressing the yellow button on the remote control.





17. Basic functions supported by the remote control

17.1 Guide



This function displays a programme guide. The contents of current, future and detailed information depend on what a given station broadcasts.

Having selected a programme, you can use the timer function (green button) to automatically plan the viewing or recording of a given programme.



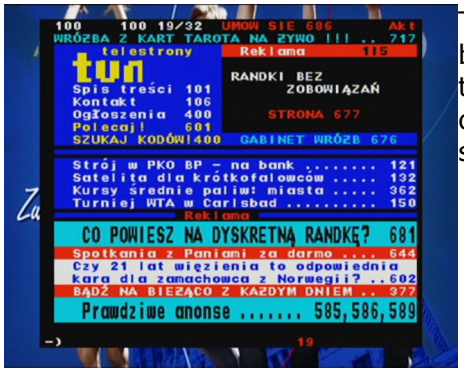
Select the desired programme and press **info** in order to view detailed information about the programme. Keep in mind that the availability of the said information depends on what a given television station is broadcasting.

17.2 FIND



The FIND button calls up the quick channel search function. Enter successive letters by choosing them one by one. The results list is updated after each successive letter is added. Press the blue button in order to proceed to the list containing results of the search procedure and select the desired channel.

17.3 TXT - teletext



This function displays the teletext, provided that it is broadcast by the selected television station. Keep in mind that the correct code page (diacritical marks) is displayed depending on the language settings made in the language settings menu!

17.4 AUDIO



The green audio button displays a window with available audio soundtracks. You can select any of the broadcast soundtracks. Please keep in mind, however, that audio soundtracks with AC3 surround sound may be played back solely through an amplituner connected to the digital audio out – Coaxial or Optical.

This function is also available when playing back a recording, provided that the material was recorded in TS format. Audio soundtracks other than those recorded by default will be available during playback only if they are not scrambled or scrambled in the same way as the default recorded soundtrack.

Option [level] can adjust the volume of the channel. This option works independently for each channel.

17.5 SUBTITLE

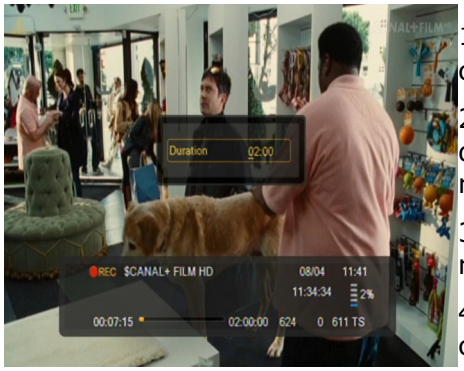


The yellow button displays a window with available on-screen captions /subtitles. You can select any of the broadcast subtitles. If subtitles for a given language have been activated in the menu, these will be marked as default on the list. You can, however, select any of the broadcast subtitles. Keep in mind that the availability of subtitles and the way in which they are displayed depends on the broadcaster!

This function is also available when playing back a recording, provided that the material was recorded in TS format.

17.6 REC - recording

This function is available only when an external USB memory device is correctly connected!!!



1. Select a channel and press the REC ● button. The present channel will now be recorded.

2. If you press the REC button again, a list of options will be displayed, where you can determine the duration of the recording (by default, this is 2 hours).

3. The information bar indicates which programme you are recording and viewing.

4. In order to terminate recording, press the STOP button and confirm your decision.

Keep in mind that during recording, the information bar may be hidden by means of the BACK button. In order to restore the bar, press REC again.

Browsing through a recording – during recording.

1. The contents of a recording are available for browsing in the course of recording.

2. Use the Fast forward and Rewind buttons to navigate within a current recording and press the PLAY button in order to start viewing from a selected moment.

3. You can set the red cursor by means of the LEFT/RIGHT buttons and confirm with OK in order to start viewing from a selected moment.

4. Another method consists in moving by means of the ⏫ / ⏬ keys. Scrolling is effected by the number of minutes defined in the DVR configuration menu. Keep in mind that this function is available only when the time of the recording exceeds the selected scroll time.

5. Another option of quick scrolling a recording is based on usage of the numerical keys. This results in scrolling in accordance with the value applied, i.e. 4 in order to pass to 40% of the recording, 5 in order to pass to 50% of the recording, etc.

SEMI-TWIN TUNER

The receiver is equipped with a so-called SEMI-TWIN TUNER; during recording, this function allows you to watch a different channel broadcast on the same frequency.

1. When recording a channel, press OK in order to display a list of channels available from this transponder.
2. If the recorded channel is not scrambled (FTA) - select any other channel, which you want to watch.
3. If the recorded channel is scrambled - select any other not scrambled (FTA) channel, which you want to watch.
4. You can stop recording at any time by pressing the STOP button.

17.7 PAUSE - time shift

This function is available only when an external USB memory device is correctly connected!!!

The time shift mode allows the user to control the television broadcast by "pausing" and then resuming it from the same point. From the moment you switch on the time shift mode, the Ferguson receiver will constantly record the signal from the satellite in a buffer. The buffer is created automatically on the external USB memory device.



Pausing the television broadcast

1. Press **PAUSE**
2. The time elapsed bar will now be visible on the screen
3. Press the **PLAY** button in order to resume the television broadcast. The Ferguson receiver continues to record the television broadcast when viewing the previously broadcast programme.

Keep in mind that during buffer playback, the information bar may be hidden by means of the BACK button. In order to restore the bar, press PAUSE/PLAY again.

Scrolling the contents of the time shift buffer (playback of an earlier television broadcast)



1. Switch on the time shift mode by pressing PAUSE.
2. The contents of the time shift buffer can now be scrolled through.
3. Use the Fast forward and Rewind buttons to navigate through the time shift buffer and press PLAY in order to start playback.
4. You can set the red marker by means of the LEFT/RIGHT buttons and confirm with OK in order to start playback from a selected moment.
5. Another method consists in moving by means of the ⏶ / ⏷ keys. Scrolling is effected by the number of minutes defined in the DVR configuration menu. Keep in mind that this function is available only when the buffer time exceeds the selected scroll time.

Recording the time shift buffer



1. This option is available only if previously switched on in the receiver's menu.
2. Switch on the time shift mode by pressing **PAUSE**.
3. Press REC in order to record the existing buffer and continue recording the channel.
4. Perform further operations in accordance with description given for the recording function.
5. It is also possible to view the contents of the current recording as above.

Switching off the time shift mode

Switch off the time shift mode by means of the STOP button.

Keep in mind: when no external memory device is connected to the USB port, the PAUSE button is used to temporarily pause the image, i.e. freeze-frame.

17.8 INFO



Pressing the INFO button will call up the information bar for the current channel. This contains information about the current and next programmes (if such information is made available by the broadcaster)

If you press it twice, the receiver will display detailed information about the current and next programme – provided that such information is made available by the broadcaster (select by pressing the LEFT/RIGHT buttons)

If you press it three times, the receiver will display complete weekly information the program – provided that such information is made available by the broadcaster.





17.9 FAV – favourites



If you press the FAV button, the receiver will display a window with groups of favourites (provided that the user has created such groups).

ATTACHMENT A - GLOSSARY OF TERMS

CA - Conditional Access – a coding system used in order to protect transmitted data against unauthorised access. Access to protected channels is available only to subscribers.

CAM - Conditional Access Module – an electronic device, usually fitted with card slots, that allows access to coded pay-per-view channels on a receiver equipped with a CI socket.

CI - Common Interface – CI sockets of digital receivers are used for the installation of CAM conditional access modules, and thus allow you to view coded pay-per-view channels through these modules.

DVB-S the Digital Video Broadcasting standard that defines modulation and error correction in satellite transmissions. In DVB-S, both the MCPC and SCPC modes can be used by the operator to transmit channels. MPEG-2 is used as the transport stream.

Guide - Electronic Programme Guide – a service that displays detailed information about current and future programmes on the television screen.

FTA - Free-to-air – uuencoded radio and television channels that may be received on any television set.

LNB - low-noise block converter – a converter - it converts satellite signals, and then sends them to the tuner through a coaxial cable. The basic parameters are: gain, noise factor and power consumption.

MCPC - multiple channels per carrier – more than one signal (channel) is transmitted on a given frequency (transponder). All of these channels comprise a single data stream, which is transmitted on one frequency following modulation.

Monoblock – a device that comprises two converters and a DiSEqC switch in a single housing, which receives signals from two satellites on similar orbits.

Pay-TV – Pay-per-view digital television, to which only subscribers have access. The service is provided by satellite, cable, over the ground or through the network.

SCPC - Single channel per carrier – only one signal (channel) is transmitted over a given frequency (transponder).

STB - Set-top box – an electronic device connected to the television set, which processes the signal received from the ground-based, cable or network satellite antenna. It enables the playback of video and sound.

TP - Transponder – a type of wireless communication device (transmitter), which automatically receives, modulates, strengthens and responds to a signal coming in real time over a specific frequency. The term is derived from the words "transmitter" and "responder". Usually, each transponder transmits numerous compressed digital channels.

DiSEqC - (Digital Satellite Equipment Control) a communication protocol, used between a satellite receiver and equipment such as switches or positioners, which supports switching between television signal sources and antenna control.

USALS – (Universal Satellites Automatic Location System) – a communication protocol used between satellite receivers and positioners, which makes it possible to control the positioner through the receiver. Used in connection with the DiSEqC 1.2 protocol.

ATTACHMENT B – RCU650 Device Brand Code List

Long list of models can be downloaded from www.ferguson-digital.eu

Ferguson:

RCU	Code	Device
RCU-200	1244	DVB-T
RCU-580	1246	DVD
RCU150	1247	HDplayer
RCU310	1245	HDplayer
AV-770	1248	TUNER

TV

AEG	0057 0083 0056
AIWA	0056 0643
AKAI	0006 0015 0016 0041 0045 0050 0051 0052 0035 0061 0083 0057 0056 0101 0038 0106 0504 0505 0507 0508 0532 0538 0539 0544 0586 0178
AMSTRAD	0035 0041 0049 0051 0056 0083 0057 0111 0503 0507 0508 0520 0538 0539 0540 0568
BANG & OLUFSEN	0000 0501
BARCO	0000 0010 0560
BAUER	0064 0056 0042
BEKO	0021 0034 0036 0038 0057 0056 0085 0063 0506 0542 1094
BIAZET	0056 0002
BLAUPUNKT	0014 0015 0024 0026 0057 0059 0503
CARREFOUR	0057 0056 0517
CASIO	0057
CLATRONIC	0057 0503 0507 0508 0520 0526 0532 0542
DAEWOO	0006 0016 0050 0051 0052 0055 0056 0062 0063 0079 0081 0086 0087 0096 0057 0507 0532 0128 0129 0132 0135 0562 0595 0616
DELL	0516
ECHOSTAR	0051 0056 0006
ELEMIS	0038 0056
FINLUX	0019 0020 0038 0044 0051 0052 0056 0063 0057 0035 0501 0504 0233 0510 0511 0512 0526 0532 0558 0568 0582 0585 0586
FUNAI	0051 0063 0095 0056 0024 0104 0049 0038 0503
GOLDSTAR	0007 0008 0009 0016 0006 0017 0021 0023 0025 0002 0036 0043 0042 0057 0051 0053 0063 0064 0065 0060 0088 0089 0056 0097 0058 0098 0038 0116 0117 0507 0532 0543 0549 0586 0624
GRUNDIG	0014 0015 0026 0044 0061 0091 0086 0100 0101 0109 0511 0526 0547 0564 0572
HAIER	0057
HISENSE	0009 0023 0057 0342

HITACHI	0056 0006 0008 0009 0012 0013 0020 0022 0027 0030 0032 0033 0045 0080 0060 0062 0068 0069 0074 0083 0002 0057 0035 0111 0112 0504 0510 0514 0517 0522 0525 0527 0528 0529 0128 0130 0133 0542 0568 0574 0575 0148 0605 1078
LG	0007 0008 0009 0016 0006 0017 0021 0023 0025 0002 0036 0043 0042 0057 0051 0053 0063 0064 0065 0060 0088 0089 0056 0097 0058 0098 0038 0116 0117 0507 0532 0128 0129 0132 0134 0543 0135 0549 0565 0145 0146 0586 0624
LOEWE	0000 0043 0056 0065 0501 0532 0551 0586 0177
MARANTZ	0056 0532 0586
MEDION	0057 0085 0081 0056 0503 0507 0509 0523 0529 0530 0127 0129 0538 0553 0556 0562 0571 0586 0591 0598 0599 0600 0601 0602 0603 0607 0643 0861 0174 0176 0182 1001 1073
MITSUBISHI	0000 0056 0005 0015 0024 0033 0038 0050 0051 0060 0057 0109 0501 0517 0520 0532 0534 0551
NAD	0060
NEC	0024 0051 0005 0054 0082 0072 0057 0039 0059 0050 0062 0056 0517 0536 0591 0183
NISSAN	0053
NOKIA	0056 0049 0083 0035 0521 0147
NORDMENDE	0002 0010 0011 0012 0013 0037 0040 0063 0067 0056 0083 0057 0085 0501 0515 0527 0528 0532 0559 0570 0571 0574 0172
ORION	0005 0041 0049 0051 0059 0063 0056 0021 0057 0016 0038 0056
PACKARD BELL	0597
PANASONIC	0026 0047 0075 0084 0002 0038 0106 0107 0108 0054 0114 0537 0569 0579 0580
PHILIPS	0000 0006 0016 0018 0025 0026 0046 0071 0073 0076 0078 0094 0097 0099 0057 0056 0105 0110 0501 0513 0525 0526 0532 0542 0545 0559 0562 0586 0674 0124 0125 0126 0128 0132 0143
PIONEER	0057 0092 0093 0013 0046 0532 0132 0133 0574 0576 0586
RADIOSHACK	0060 0057 0056
RCA	0521
ROYAL	0051 0049 0041 0056 0006 0021
SABA	0001 0003 0010 0011 0012 0013 0016 0028 0031 0037 0040 0056 0063 0002 0501 0527 0528 0559 0568 0570 0571 0574 0616
SAMSUNG	0004 0006 0007 0008 0036 0045 0049 0051 0052 0053 0056 0058 0059 0060 0070 0016 0077 0057 0102 0103 0115 0118 0119 0503 0504 0507 0520 0532 0127 0128 0129 0131 0132 0134 0542 0135 0546 0549 0554 0140 0146 0654 0168 0207
SANYO	0000 0056 0006 0024 0033 0036 0052 0083 0102 0103 0504 0505 0510 0512 0517 0519 0520 0521 0524 0526 0128 0130 0131 0542 0138 0571
SCHAUB LORENZ	0016 0030 0036 0049 0050 0051 0053 0035 0080 0088 0063 0002 0056 0169 0170 0171 0509 0550 1071

SCHNEIDER	0000 0006 0016 0017 0018 0021 0025 0026 0035 0038 0041 0046 0051 0056 0057 0059 0071 0073 0076 0078 0083 0094 0097 0099 0105 0110 0508 0532 0538 0574 0586 0616
SHARP	0006 0024 0033 0048 0502 0517 0519 0130 0137 0147 0592
SIEMENS	0015 0026 0056 0101 0519
SKYWORTH	0607 0160
SONY	0005 0024 0056 0077 0029 0105 0504 0507 0517 0519 0520 0129 0130 0131 0136 0555 0571 0149 0421
TATUNG	0006 0016 0052 0005 0040 0056 0504 0532 0568 0586
TCL	0064
TECHNICS	0051 0054 0047
TECHNIKA	0041 0051
TECHNISAT	0057 0056
TELEFUNKEN	0001 0011 0012 0013 0016 0021 0028 0037 0040 0057 0056 0531 0532 0533 0132 0133 0552 0554 0559 0570 0571 0574 0583 0594
TEVION	0057 0063 0056 0532
THOMSON	0001 0003 0002 0010 0011 0012 0013 0014 0019 0028 0031 0037 0038 0040 0061 0067 0085 0090 0113 0527 0528 0531 0532 0533 0552 0559 0570 0571 0574 0583 0589 0591 0616 0173 0166 0167
TOSHIBA	0056 0033 0034 0045 0063 0083 0511 0517 0130 0541 0136 0139 0564 0141 0142 0144 0584 0593 1017
UNIMOR	0102 0056 0025
VESTEL	0009 0038 0083 0057 0056 0532 0542 0548 0553 0556 0586 0596 0132 0214 0215

SAT

AMSTRAD	0806 0812
ARION	0354
BLAUPUNKT	0739
BSKYB	0812
CANAL SATELLITE	0822
CANAL+	0822
COMAG	0762 0349 0353 0363
ECHOSTAR	0759 0760 0770 0829 0830 0831 0832 0833 0870 0881 0882
ENIGMA	0358
FINLUX	0766 0769 0784 0849
GLOBECAST	1135
GOLDEN INTERSTAR	0205
GOLDSTAR	0776
GRANVISION	0350 0351
GRUNDIG	0398 0399 0722 0738 0739 0772 0780 0784 0845
HEAD	0361
HIRSCHMANN	0739 0775 0793 0810 0815 1161 1155
HITACHI	0784 0802
HUMAX	0773 0790 0360 0365 0366

ITD(SAGEM)	0311 0323
ITT/NOKIA	0753 0784 0802
KATHREIN	0383 0393 0739 0783 0345 0848 0856 0867 0208
LG	0381 0394 0776
MEDIASAT	0734 0822
MEDION	0382 0384 0385 0730 0742 0768 0778 0786 0788 0800 0820 0833 0834 0857 0364 0873 0877 1167 1133 1132 1125
MITSUBISHI	0739 0784 0825
NEC	0785
NOKIA	0753 0784 0806 0819
NORDMENDE	0720 0724 0763 0784 0846
OCTAGON	0720 0722 0755
OPENBOX	0204
OPTEX	0758 0880 0338 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243
PACE	0739 0784 0796 0812 0816 0856
PHILIPS	0397 0399 0400 0736 0754 0755 0772 0778 0780 0784 0789 0808 0817 0822 0825 0847 0854
PIONEER	0398 0822
POLSAT	0846
PREMIERE	0742 0758 0807 0822
SAGEM	0846 0876
SAGEM TNTSAT	0331
SAMSUNG	0378 0391 0395 0396 0720 0731 0207
SCHNEIDER	0754 0786 0833 0834
SCHWAIGER	0382 0385 0386 0387 0388 0725 0732 0735 0740 0784 0788 0820 0826 0827 0828 0834 0855 0867 1160 1145 1141 1128 1127
SEG	0720 0744 0806 0867 0869
SKY DIGITAL	0812
SKY+	0812
TECHNISAT	0386 0738 0797 0344 0822 0860
TOPFIELD	0781 0782 0343
VANTAGE	0362
VESTEL	0214 0215

DVB

CANAL+	1163
ECHOSTAR	0989
FREEVIEW	0747 0751 0752 0771 0787 0798 0843
GRUNDIG	1159
HUMAX	0532
MEDION	0877
PACE	0752 0796
PHILIPS	0843
PIONEER	0858

PREMIERE	0843
SAGEM	0876 1137
SONY	0747
TCM	1121 1080
THOMSON	0798

DVB-T

FERGUSON	1244

CableBox

BT	0811
CANAL PLUS	0765
MOTOROLA	0779
PIONEER	0791 0792
SAMSUNG	1142
SCIENTIFIC ATLANTA	0794 0795
UPC	1137

DVD

AEG	0670 1001
AIWA	0698 0703
AKAI	0670 0680 0694 0702 1001
AUDIOVOX	1031
BLAUPUNKT	0704
CAMBRIDGE	0697
DAEWOO	0683 0684 0685 0700
DENON	0455
DENVER	0701 1001 1084
DK DIGITAL	0686
ELTA	0670 0691 0702 1001
FERGUSON	1246
FINLUX	0681 0687
FUNAI	0674
GOWELL	0429
GRUNDIG	0670 0680 0697 0699 0700
HARMON/KARDON	0712
HITACHI	0408 0409 0413 0419 0680 0692 0693 0705 0709
HYUNDAI	0681
JBL	0712
JVC	0690 0717 1051 1089
LG	0411 0421 0452 0453 1056
MARANTZ	0690 1062 1104
MEDION	0667 0671 0673 0674 0675 0676 0677 0681 0682 0686 0688 0695 0453 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1021 1023 1046 1118 1119 1120 1096 1097 1098 1099 1100
PACKARD BELL	1028 1029 1116 1085
PANASONIC	0412 0718 1055

PHILIPS	0403 0407 0416 0420 0674 0690 0445 1060 1061 1062 1124 1123 1105
PIONEER	0404 0693 1054 1058
RCA	0704 0716
SAMSUNG	0413 0418 0673 0692 1016 1050
SANYO	0414 0670 0680 0699
SCHAUB LORENZ	1001 1110
SCHNEIDER	0670 0680 0681 0682 0686 0700 1001
SCHWAIGER	0679
SHARP	0406 0415 0680 0711 0451 1087
SONY	0410 0417 0719 1066 1067 1068
TEAC	0670 0693 0704
TECHNICS	0716
TECHNIKA	0686
TOSHIBA	0407 0422 0690 1017 1057 1117 1122
VESTEL	0680 0441
X-BOX	0716
YAMAHA	0706 0443 1060 1061

DVR

HITACHI	0705
JVC	1089
LITEON	1046 1090
MEDION	1002 1046 1100
PACKARD BELL	1029 1085
PHILIPS	1060 1061 1124 1105
SHARP	1087
SONY	1066 1067 1068
THOMSON	0689
TOSHIBA	0690 1057 1117
YAMAHA	1060 1061

VCR

AIWA	0608 0643
AKAI	0611 0612 0613 0666
BLAUPUNKT	0621 0625 0626 0630 0652 0662
DAEWOO	0616 0627 0393
FINLUX	0621 0622 0647
FUNAI	0674
GRUNDIG	0610 0621 0626 0630 0631 0639 0640 0641 0657
HITACHI	0621 0628 0705 0455 0456 0459 0460 0462 0472 0481
JVC	0645 0646 0717
LG	0624 0455 0457 0459 0461 0470 0475 0479
LOEWE	0621 0625 0630 0662
MARANTZ	0621 0630 0636
MEDION	0608 0625 0629 0643 0673
MITSUBISHI	0621 0642 0645 0647
NEC	0645

PANASONIC	0625 0656 0660 0662 0458 1055
PHILIPS	0610 0614 0621 0630 0639 0657 0664 0454 0465 0473 0478
PIONEER	0621 0645
SAMSUNG	0654 0673 0463 0469 0476 1050
SANYO	0622 0634 0638 0467
SHARP	0636 0665 0464
SONY	0618 0651 0652 0653 0655 0719 0468 0477
TECHNICS	0625
THOMSON	0614 0616 0645 0646 0650 0663
TOSHIBA	0621 0627 0643 0659 0690 0456 0462 0466 0471 0474 0477 0480

AUX/TUNER/TAPE

AIWA	0698 0948
DUAL	0671 0677 0695 0908 0935 0958 0978 0990
ELTA	0886 0887 0935
FERGUSON	1248
GRUNDIG	0911 0925 0926
HARMON/KARDON	0895 0896
IPOD	0998
JVC	1051
LG	1056
MEDION	0671 0677 0695 0908 0935 0964 0965 0966 0978 1120 1096 1098
NAD	0929 0930
ONKYO	0955
PACKARD BELL	1116
PANASONIC	0807
PHILIPS	0925 0926
PIONEER	1054 1058
PREMIERE	0807
SAMSUNG	0945 1016
SONY	0931 0932 0933 0940 0941 0942 0943 0944
SONY NETWORK	0746
TEAC	0443
TECHNICS	0949
THOMSON	0846 0979
YAMAHA	0924 0946 0947

HDD, HDplayer

AMSTRAD	0812
BSKYB	0812
ECHOSTAR	0882
FERGUSON	1245 1247
HUMAX	0878
HYUNDAI	0774
MEDION	0730 0788 0873 1167 1046 1125 1118 1100
PACE	0752 0812
PACKARD BELL	1085

PHILIPS	0614 1124
SAGEM	1137
SCHWAIGER	0788 1145 1127
SIEMENS	1148
SKY+	0812
SONY	0545 1066 1068
THOMSON	0614 0663 0798
TIVO	0614
TOPFIELD	0782
TOSHIBA	1117

ADSL

FREEBOX TV	1162
ORANGE	1166
SAGEM	1163
SAMSUNG	1143
THOMSON	1166
TPS ADSL	1165 1166
UPC	1137

CD/LD

AKAI	0985 0986 0987
DENON	0619 0658 0885
GRUNDIG	0658 0894 0928
HARMON/KARDON	0897
HITACHI	0898 0899 0983
JVC	0900
KENWOOD	0901 0902
LG	0884
MARANTZ	0928
MEDION	0887 0891 0892 0927 0934 0935 0936 0959 0960 0963 0972 0980
MITSUBISHI	0658
NAD	0658 0888 0929
NAIM	0928
ONKYO	0906 0907
PANASONIC	0883 0909
PHILIPS	0910 0928 0982
PIONEER	0658 0890 0893
ROTEL	0928
SAMSUNG	0945
SHARP	0889 0916 0917 0918
SONY	0888 0919 0920 0933 0937 0938 0939
TEAC	0957
TECHNICS	0909 0922
TELEFUNKEN	0658 0983
TOSHIBA	0923
YAMAHA	0916 0921 0947

Blu-Ray, DVD

DENON	1186
LG	1191
MARANTZ	1192 1193
NAD	1194
ONKYO	1190
OPPO	1196
PANASONIC	1197
PHILIPS	1198 1199
PIONEER	1200 1201
SAMSUNG	1202
SHARP	1203
SONY	1204
YAMAHA	1207

ATTACHMENT C - SPECIFICATION

Ariva	102mini	103	52E	102E	202E	203	150Combo 152Combo	250Combo 252Combo
Dimension (cm)	W: 11 D: 7 H: 1.8	W: 22 D: 15.3 H: 4	W: 22 D: 15.3 H: 4	W: 26 D: 15 H: 4.5	W: 26 D: 18 H: 4.5	W: 26 D: 15 H: 4.5	W: 26 D: 18 H: 4.5	W: 26 D: 18 H: 4.5
Net Weight	0.3 kg	0.7 kg	0.8 kg	1.1kg	1.4 kg	0.9 kg	1.4 kg	1.5 kg
Input Voltage	DC 12V	AC 175-250V~ 50Hz/60Hz						
Power Consumption	Max 24W	Max 25W	Max 30W					
Standby	< 0, 5 W							
1.Main Chip Sets								
CPU frequency (MHz)	400	600	400	400	400	600	400	400
Flash Memory	1PC 32Mbit/8Mbyte SPI FLASH							
DDR II Memory	1PC 64MX16bit/128Mbyte							
2.DVBS Tuner								
Tuner Type	ON BOARD							
Frequency Range	950 ~ 2150MHz							
Input Impedance	75Ω							
LNB Power and Polarization	Vertical 13VDC; Horizontal 18VDC @ 400mA (max) 22KHz±0.4KHz(0.6V±0.2V) tone, Overload Protection							
Input Level Range	-65dBm ~ -25dBm							
3.DVBS Channel Decoder								
DVBS Demod standard	DVB-S, DVB-S2							
DVBS Demodulation	QPSK, 8PSK							
DVBS Symbol Rate	2 ~ 90MSPS (Code Rate 1/2)							
DVBS Code Rate	1/2, 2/3, 3/4, 5/6, 7/8 for DVBS, 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 for DVBS2							
4.TS Demux								
Demultiplexer	MPEG2 ISO/IEC 13818-1							
Input Bit Rate	Max 100Mbit/s							
5.Video Decode								
Video Decode	MPEG2 ISO/IEC 13818-2 MP@ML, H.264(MPEG4 part 10) main and high profile level 4.1/MPEG-2 MP@HL							
Video Resolution	1920×1080, 1280×720, 720×480							
6.Audio Decode								
Audio Decode	MPEG-1 layerI/II, PCM downmix, IEC958 SPDIF, Dolby 5.1 channel, Dolby downmix 2 channel, Dolby Prologic2							
Sound Mode	LEFT/RIGHT/STEREO/MONO							
Sampling Frequency	32KHz 44.1KHz 48KHz							
7.AV Output								
Video Bandwidth	SD:5.0MHz(-3dB), HD:30MHz(-3dB)							
Video Impedance	75Ω							
Video Voltage Level	1.0 Vp-p							
Audio Freq. Range	20~20KHz							
Audio Impedance	600Ω							
Audio Voltage Level	2V rms(5.6Vp-p)							
8.Environment								
Temperature	0~40℃							
Humidity	<95%							