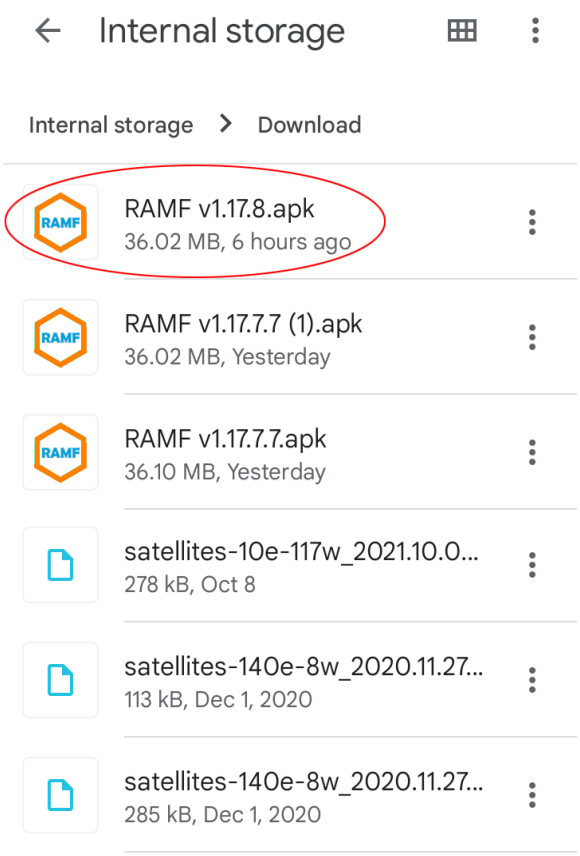
Unique features of RAMF devices

Usage without TV	**DVB2IP streamer**	**Professional satfinder options**
3D LNB installation	**Remote diagnostics**	**Open Web API**

ver. 1.1

1. Installing the application on a device running Android 5.0 or higher

Installation of the application on a smartphone (tablet) is carried out either by downloading the RAMF application from the Google Play Store, or by downloading it from another Internet resource and saving it to the Download folder. If you install from another resource, you will need to open the files, go to the Download folder and run the RAMF_v1.XX.X application to install it. There is also a simplified version of RAMF TV, which is used exclusively for watching channels on mobile devices.



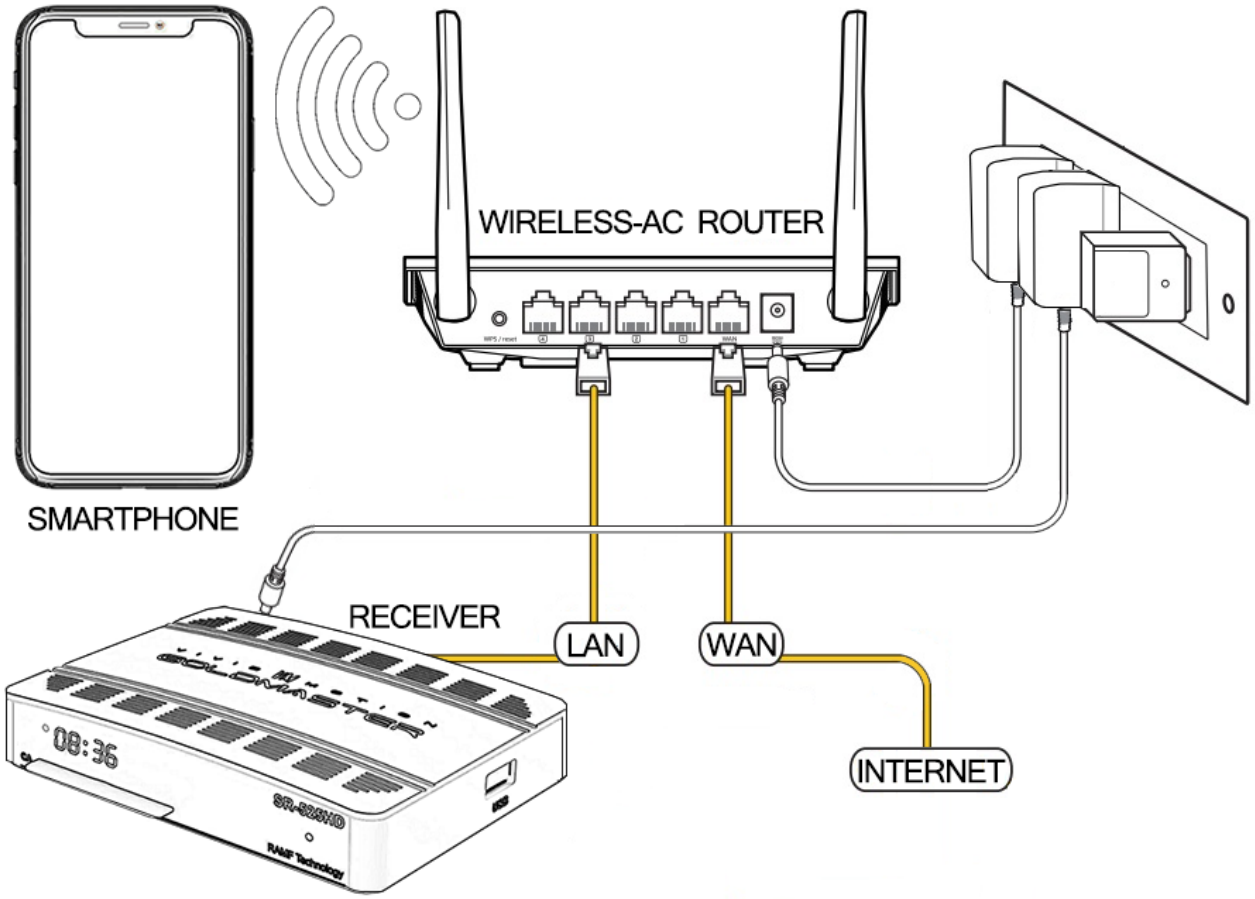
If you do not have permission to install applications from unknown sources configured, then immediately after such a notification, you must execute permission to install the application.

2. Connecting to the receiver via the network

Full receiver control without a TV is possible from an Android 5.0 or higher device. For example, we will assume that this device is a smartphone. Then, remote viewing of TV channels is possible, including from any other device that can use the *.m3u file.

The receiver must first be connected to the same network as the smartphone. Recommended connection options:

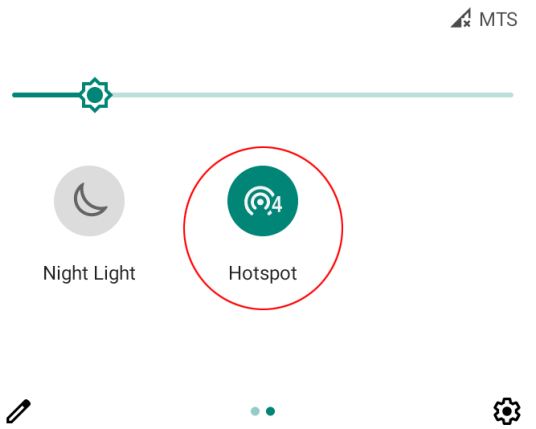
1. The most optimal connection system is that the receiver connects via LAN (if you have a receiver model with built-in LAN) to the AC router, and the smartphone connects via Wi-Fi to the router at a frequency of 5.0 GHz. This will allow you to watch Wi-Fi HD or even 4K (UHD) channels with a bit rate up to 22 MBit/s. When using this connection, problems with viewing channels may be due to insufficient smartphone performance or when 4K (UHD) channels exceed the 22 MBit/s stream.



External Internet is not required, streaming and receiver control are carried out in the local network. The Internet gives EPG for a week, and, in some cases, allows you to download channels icons that are not in the application through the EPG service.

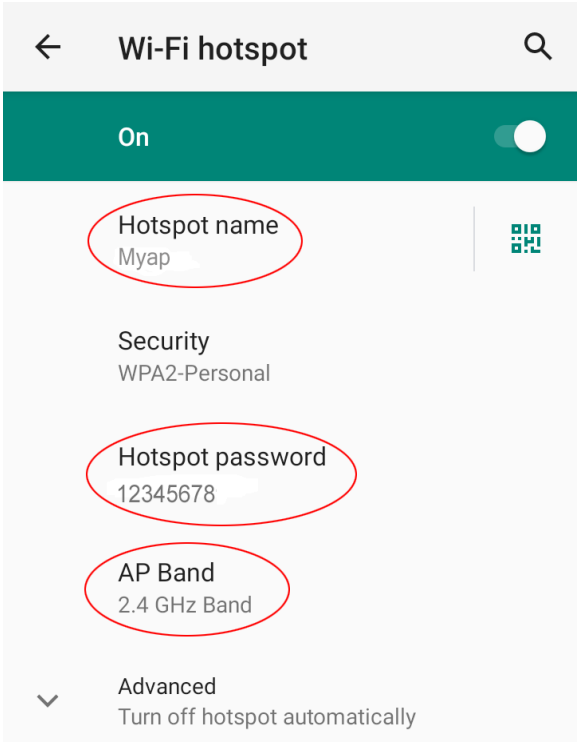
2. Connecting via a smartphone hotspot when connecting the receiver to a TV. With this connection, there may be a problem with HD channels, the speed of which exceeds 12-13 MBit/s. In practice, the vast majority of HD channels have a bit rate of 8-10 MBit/s.

You need to go to the hotspot settings. To do this, a shutter opens in the smartphone with access to quick settings and the hotspot icon is held down until its settings appear.



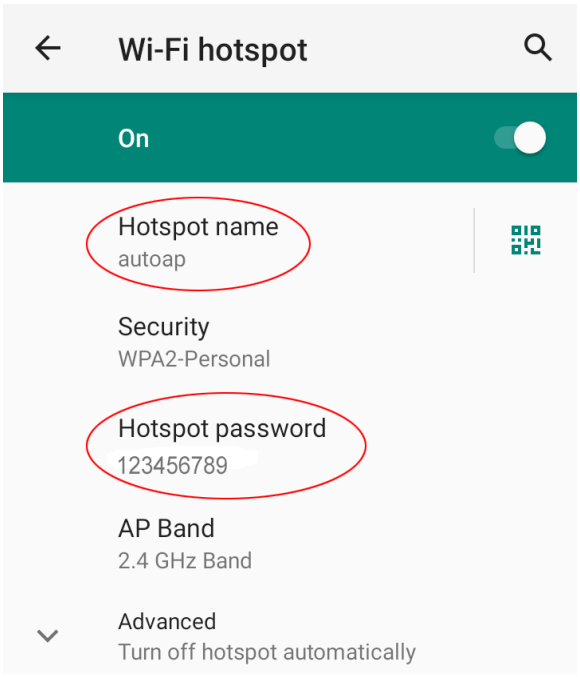
After that, you put the hotspot name, and it's the password (usually at least 8 characters) in the settings.

After that, go to the wireless connection, scan the networks and connect to the created access point in the receiver settings. You can find more details in the receiver manual.



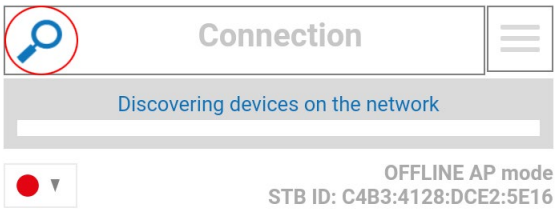
Attention! While watching channels via a smartphone, you cannot change channels on the TV, as this will cause viewing on the smartphone to stop. In case you changed the channel on the TV and want to continue watching on the smartphone, then on the smartphone you need to switch the channel through the media player.

3. Connecting via a smartphone hotspot without connecting to a TV. To do this, you need to turn on the hotspot in your smartphone with login: autoap and password: 123456789. Viewing restrictions are the same as in paragraph 2. This type of connection is used for autonomous antenna installation on the roof. In fact, a smartphone is used for installation instead of a TV. Also, this mode is needed for the initial connection in the absence of a TV and viewing on mobile devices. It remains only to make sure that the receiver has connected to the access point and you can start the application.

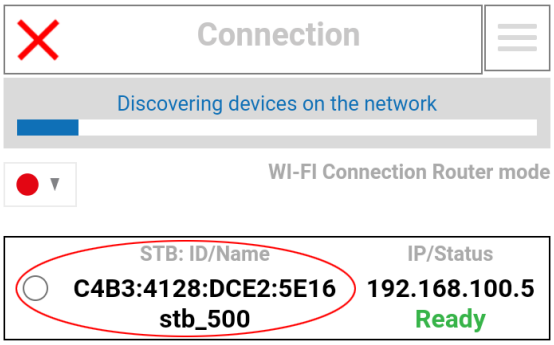


In the future, we recommend changing the username and password, this is described in paragraph 6.4. of this manual.

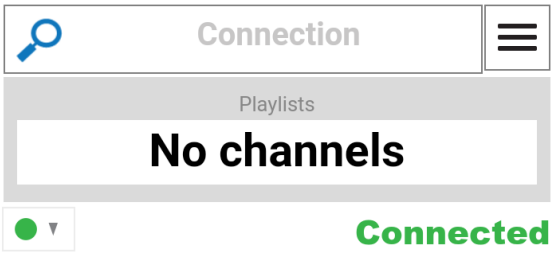
The search for the receiver can be stopped and started by clicking on the magnifying glass icon in the upper left corner.



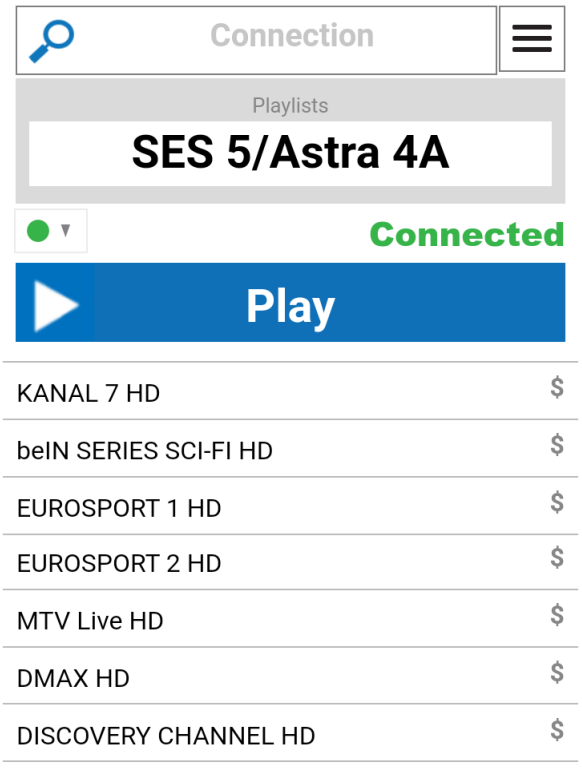
Receiver must be pre-configured to connect to the local network. After the first launch, the application will automatically determine the IP address of the receiver.



Next, to connect, you need to click on the name of the receiver. This is provided in case of simultaneous use of several receivers in the local network. Also, if there are scanned channels in the receiver, the application will ask for permission to access media files.



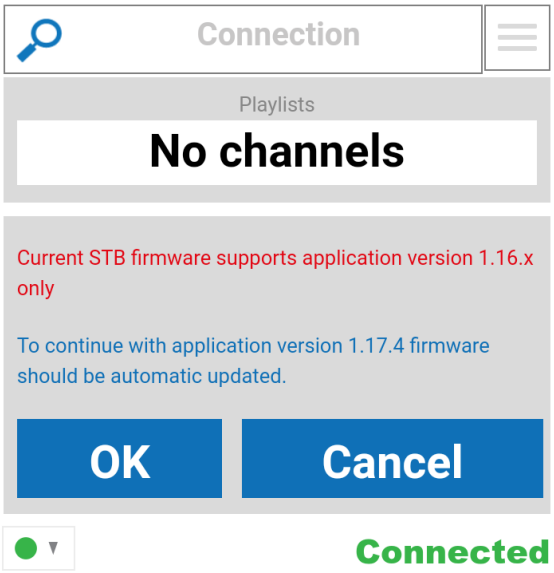
This window will be displayed when the application is initially connected to a receiver that does not have scanned channels.



If there are scanned channels on the receiver, the application will allow you to select a playlist and display the channels contained in it.

3. Updating the receiver software

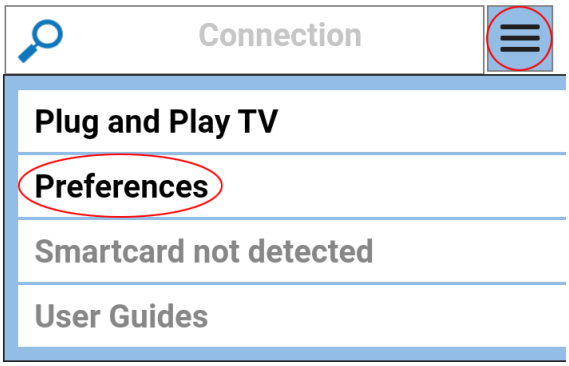
The versions of the application and the software version of the receiver must match. If the version of the application does not match the version of the receiver software (as a rule, the application is newer than the software installed in the receiver), the application will request the receiver software update. You have 2 choices – update the receiver software or find an older version of the application. In the application itself, as a rule, there is already software, and you just need to click the OK button to install it.



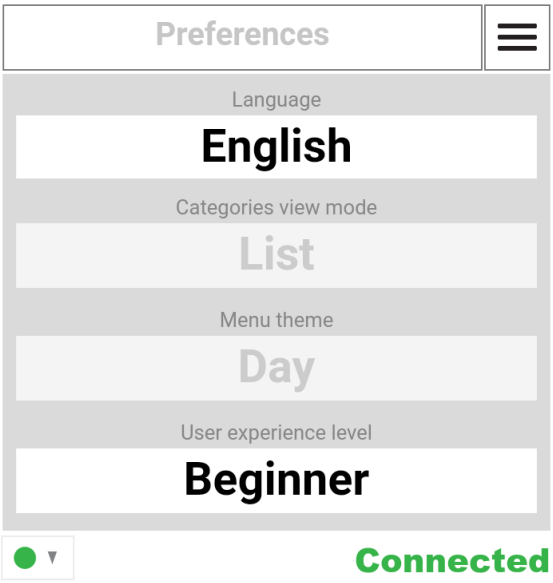
During the update, it is strictly forbidden to turn off the power of the receiver to prevent damage to it. The update process is accompanied by a graphical bar showing the percentage of completion. Finally, the receiver will reboot and, when connecting to the network, will be ready for further work with the application.

4. Changing application language

To change the language of the application, you must click on the Menu button located in the upper right corner, and select the line – Preferences from the drop-down list.



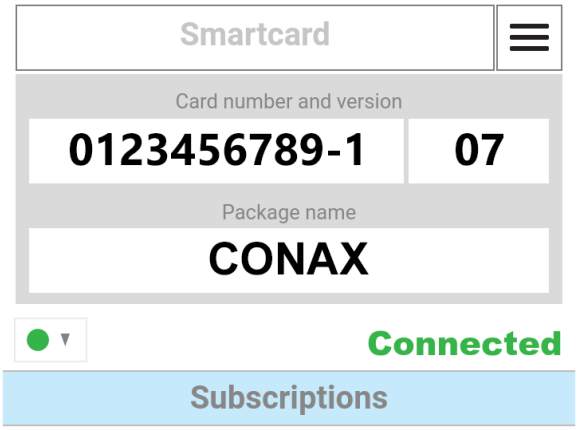
When you click on the first line with the language, you will be prompted to select the appropriate application language.



You can additionally set the category view mode - List or Slider, specify the menu theme - Day or Night, and set the user experience level - Beginner or Professional. The Beginner level user can view channels from a configured receiver only. To gain access to all the settings of the receiver, you must use the level - Professional.

5. Card information

To obtain information about the installed card in the receiver, you must click on the Menu button located in the upper right corner, and select the line – Smartcard from the drop-down list.

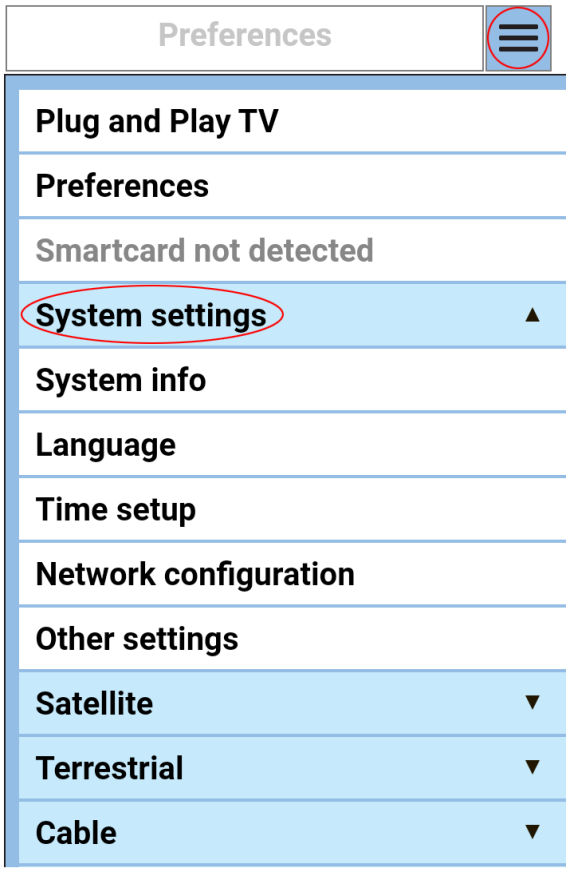


Period: **01/10/2021- 01/10/2022**
Package Class, ID: **0180019E 1010**
Package name: **Telekarta 1 West**

Information about the access card in use and the current subscriptions to the service packages are displayed.

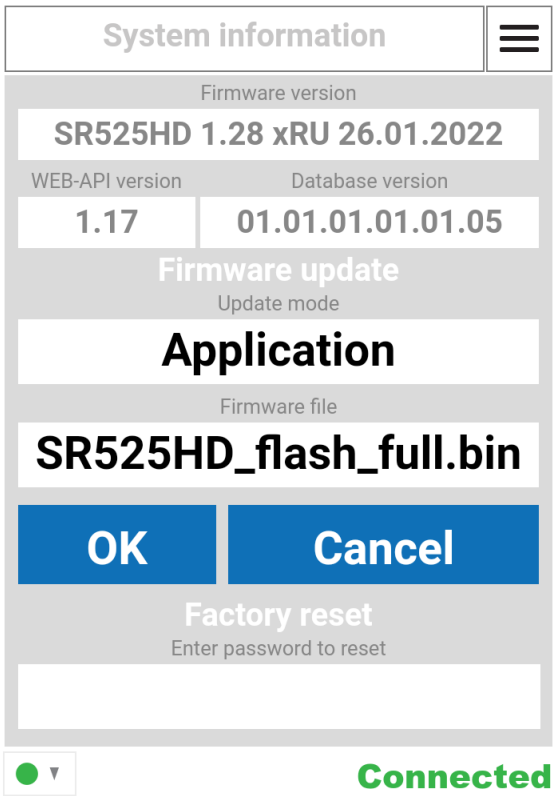
6. System settings

The application supports typical receiver settings. For these purposes, the application in the Menu uses the section – System settings.



6.1. System information

This section of the menu contains information about the firmware installed in the receiver, the WEB-API version and the database version.



Also, through this section, you can update the firmware in the receiver. Two update modes are supported – Application (updating only the main code without affecting user settings) and Full image (completely overwriting the firmware in the receiver). To update the

firmware, you can use the firmware contained in the application – SR508HD_flash_full.bin or SR525HD_flash_full.bin depending on the receiver model you are using. To do this, click on the firmware file window and specify the firmware itself or select the location of the firmware that you want to install in the receiver.

After completing the settings, press the OK button to flash the receiver. During the update, it is strictly forbidden to turn off the power of the receiver to prevent damage to it. The update process is accompanied by a graphical bar showing the percentage of completion. Finally, the receiver will reboot and, when connecting to the network, will be ready for further work with the application.

Attention! If the status of connection to the receiver in the application changes from Connected to Connection not stable and vice versa, then we do not recommend flashing the receiver through the application. In this case, errors in the transmitted packets are possible, which can damage the firmware and disable the receiver when flashing.

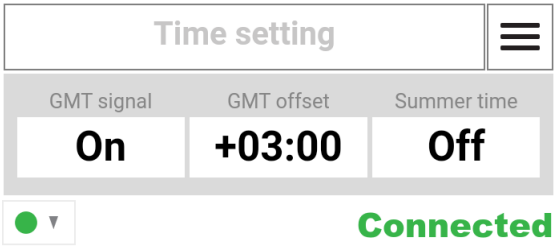
Additionally, this section provides for a receiver reset to factory settings. To do this, enter the password, which by default has a value of 0000 and press the OK button. The receiver will reboot and when connected to the network it will be ready for further work with the application.

6.2. Language

In this section, you can change the interface language of the receiver, select the primary and secondary audio languages, and specify the subtitle language.

6.3. Time setting

This section allows you to set the time on the receiver, exactly enable receiving the GMT signal from the satellite, terrestrial or cable signal, specify the time zone and set the use of daylight saving time.

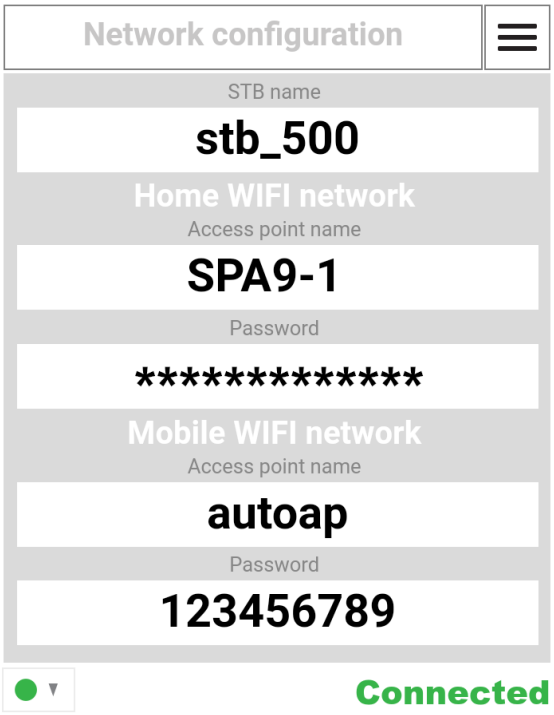


6.4. Network configuration

In this section, you can set the name of the receiver, which will be displayed in the network environment, as well as in the application when connected.

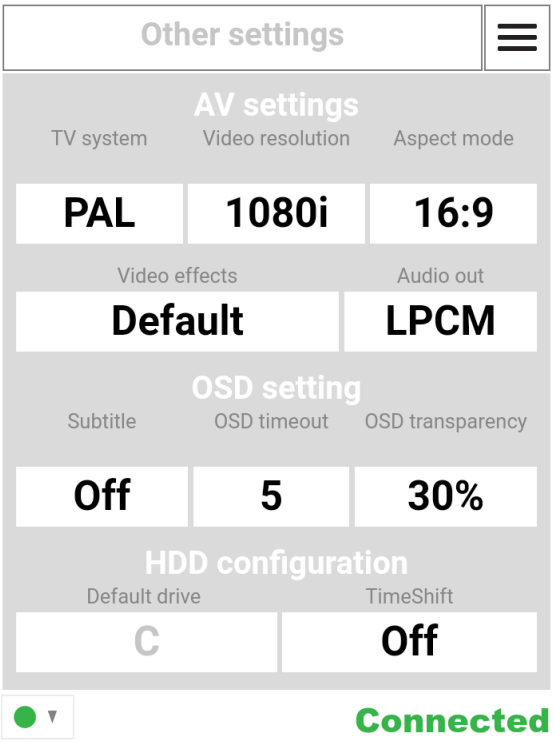
In the home WiFi network, register the hotspot name and password for wireless connection to the router.

And also in the mobile WiFi network, specify the access point name and password that will be used to connect to the smartphone (tablet) access point when the receiver is turned on without the connected HDMI cable.



6.5. Other settings

This section allows you to configure the AV receiver's audio-video settings:



TV system – specify the color system of the TV: PAL, NTSC or Auto;

Video resolution – set the TV screen resolution: 480i, 576i, 576p, 720p, 1080i, 1080p or Auto;

Aspect mode – select the aspect ratio of the TV: 4: 3LB (Letterbox), 4: 3PS (Pan & Scan), 16: 9 or Auto;

Video effects – specify the video effect of changing the image: Standard, Default or Live;

Audio out – indicates the format of the output digital audio – LPCM, BS, SPDIF or Auto.

Also in this section you can configure the receiver's messages on the TV:

Subtitles – enable or disable the display of subtitles;

OSD timeout – set the display time of the channel information banner from 3 to 10 seconds;

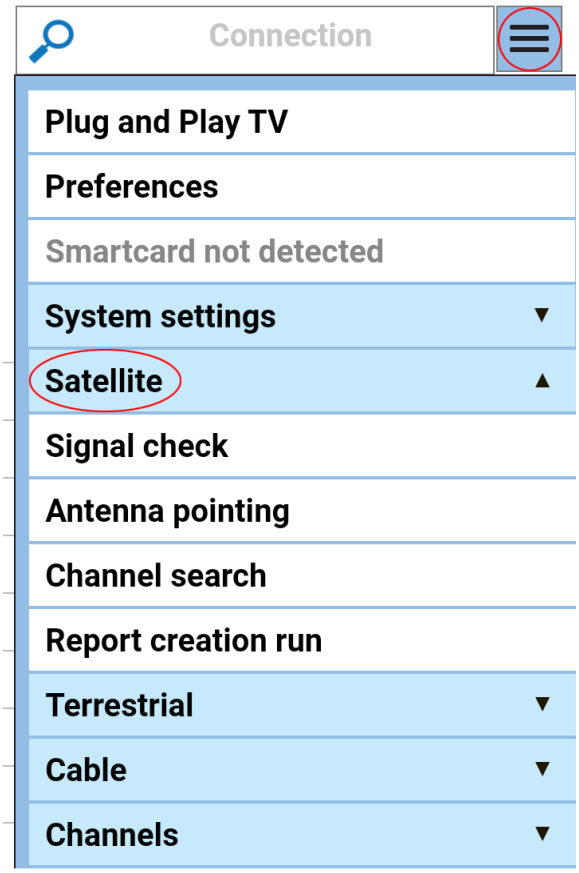
OSD transparency – specify the percentage of transparency of the displayed channel information banner from 0% to 50%.

When a storage device is connected to the receiver's USB port, its name and the ability to turn on or off the timeshift are additionally displayed.

7. Satellite TV (DVB-S/S2)

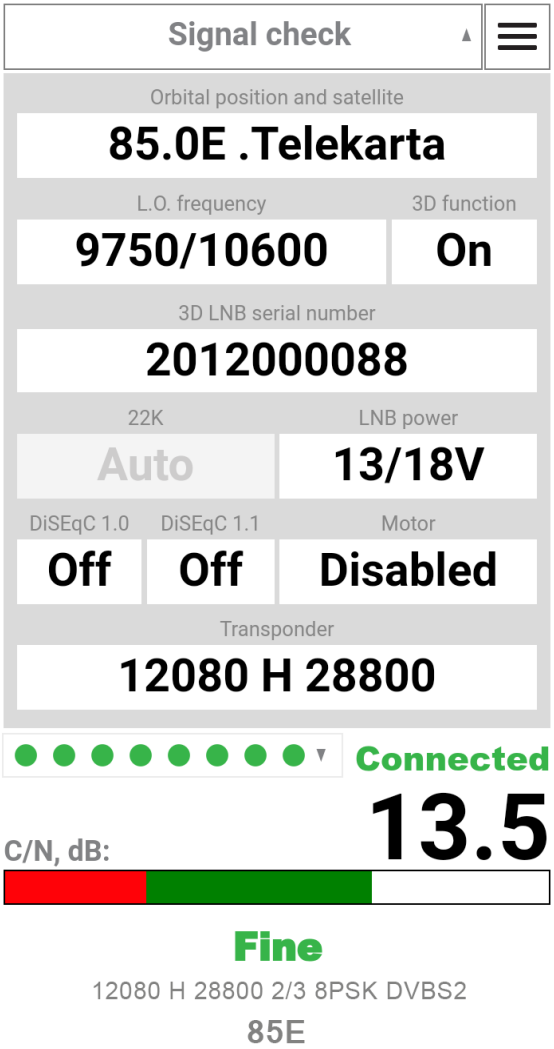
Attention! The section on Satellite TV is relevant only for those models that have an appropriate tuner for receiving DVB-S / S2 (and possibly S2X).

In this section of the application menu, you can configure the antenna, make pointing at the satellite, take a technical condition report, and scan the channels from the satellite.



7.1. Signal check

This section is used to configure the antenna – indicate the received satellite, enter the LNB, DiSEqC and motor parameters. The first time you open this section after installing the application, you will be asked to allow access to the location. You need to confirm it.



Orbital position and satellite – the required satellite or operator is selected from the drop-down list;

L.O. frequency – you can select LNB frequencies from the list;

3D function – this option is enabled only when using a special 3D LNB, otherwise it must be disabled;

3D LNB serial number – this option becomes available only when using 3D LNB. This allows the factory calibrations to be taken into account;

22K – when using a non-universal LNB, it allows you to turn on the lower or upper band of the received frequencies;

LNB power – allows you to set the LNB power supply, 13/18V – indicates the use of vertical and horizontal polarizations, 13V – only vertical polarization and 18V – only horizontal polarization;

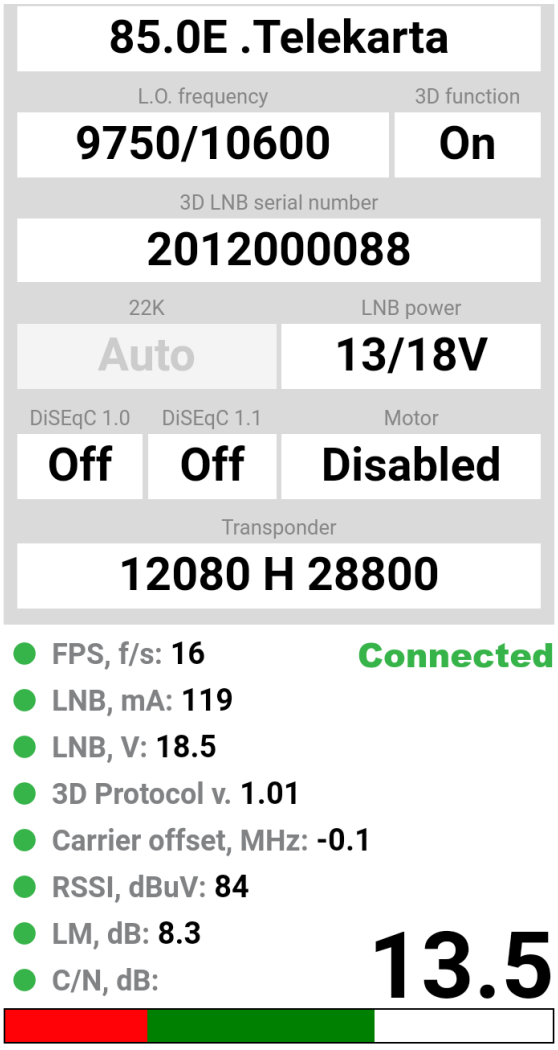
DiSEqC 1.0 – when using the DiSEqC version 1.0 (2.0), it allows you to select the port number from 1 to 4 to which the LNB for the tuned satellite is connected;

DiSEqC 1.1 – when using a DiSEqC version 1.1 (2.1), it allows you to select a port number from 1 to 16, to which the LNB for the tuned satellite is connected;

Motor – in the case of using a motorized dish, it allows you to specify the type of protocol used – DiSEqC 1.2 or USALS, according to which the motorized dish is configured;

Transponder – you can select a transponder from the drop-down list, which will be used to control the parameters of signal reception from the satellite. If there is a broadcast on the specified transponder, the level of the received signal quality in dB with an interactive graphic scale will be displayed at the bottom of the screen, and below it the conclusion about the received signal – Bad, Good or Fine. Bad – indicates insufficient received signal level (LM level from 0 to 3 dB), which can lead to problems when viewing channels. Good – indicates a normal received signal level (LM level from 3 to 6 dB), which will allow you to watch channels even with a slight deterioration in weather conditions. Fine – Indicates an excellent received signal level (LM level over 6 dB). Also, when capturing a signal from a satellite, the exact parameters of the broadcast from the transponder, the orbital position of the satellite, the name of the operator and a listing of the broadcast channels from the transponder will be displayed.

In addition, diagnostic parameters for the received transponder can be displayed by clicking on the row of colored circles.



FPS, f/s – the speed of network packets exchange between the smartphone and the receiver in frames per second, allows you to control the quality of communication with the receiver. In case of insufficient communication quality (yellow or red), it is recommended to come closer to the receiver or router through which the communication is carried out;

LNB, mA – current consumed by the LNB, in mA;

LNB, V – voltage across the LNB, in V;

3D Protocol – protocol version when using a 3D LNB;

Carrier offset – local oscillator carrier frequency deviation, in MHz;

RSSI – received signal level, in dBuV;

LM – the level of the received signal margin, in dB;

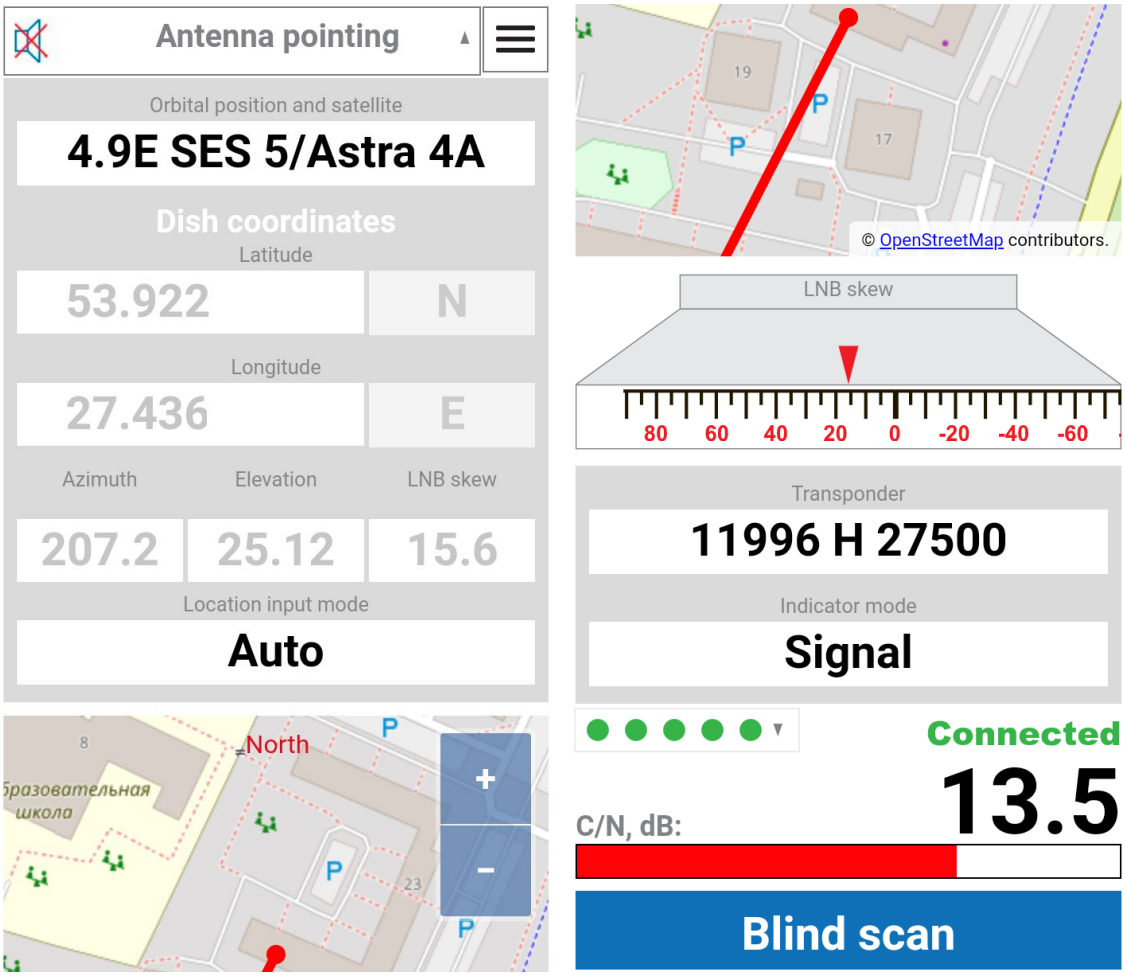
C/N – carrier-to-noise ratio in dB (received signal quality level).

7.2. Dish pointing

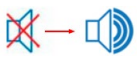
This section is used to perform accurate antenna pointing to the received satellite. Contains an interactive map showing the location of the satellite, as well as various diagnostic tools designed to simplify and speed up the installation process.

7.2.1. Dish pointing with Standard LNB

Connect mounted on the antenna universal LNB to the receiver. In fact, you can use any LNB, but you must first put its parameters to the antenna settings.



In the upper left corner there is a speaker icon, if you click on it, a tonal soundtrack will appear proportional to the received signal level. This makes it easier to find a satellite without visual control of the application.



The satellite orbital position must indicate the satellite to which the antenna will be tuned.

Then the coordinates are determined by the smartphone (tablet) in automatic mode based on the received location data. If the location is inaccurate or prohibited, you can switch

from Automatic to Manual mode in the location selection method and manually enter the exact coordinates.

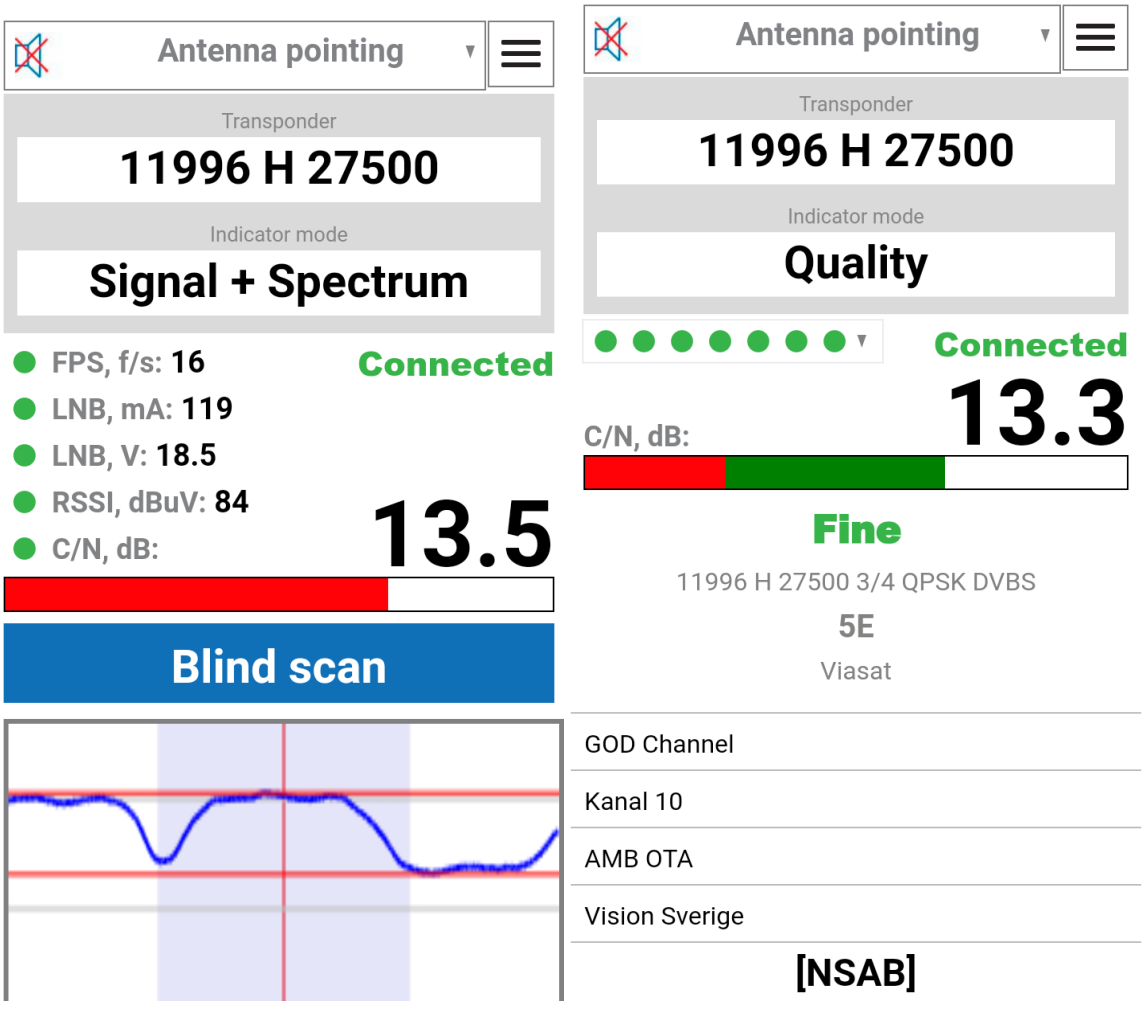
The azimuth, elevation and LNB rotation are automatically calculated based on the formulas for the coordinates used. In the absence of coordinates, these parameters will be unavailable.

Below you will see a map, for which you will need to have an Internet connection. The map schematically indicates the direction to the satellite being tuned, which allows you to orient yourself in pointing the antenna, as well as to make sure that there are no possible obstacles that affect the signal transmission. Nearby high-rise buildings can act as barriers, in this case it is necessary to reconsider the location of the satellite dish.

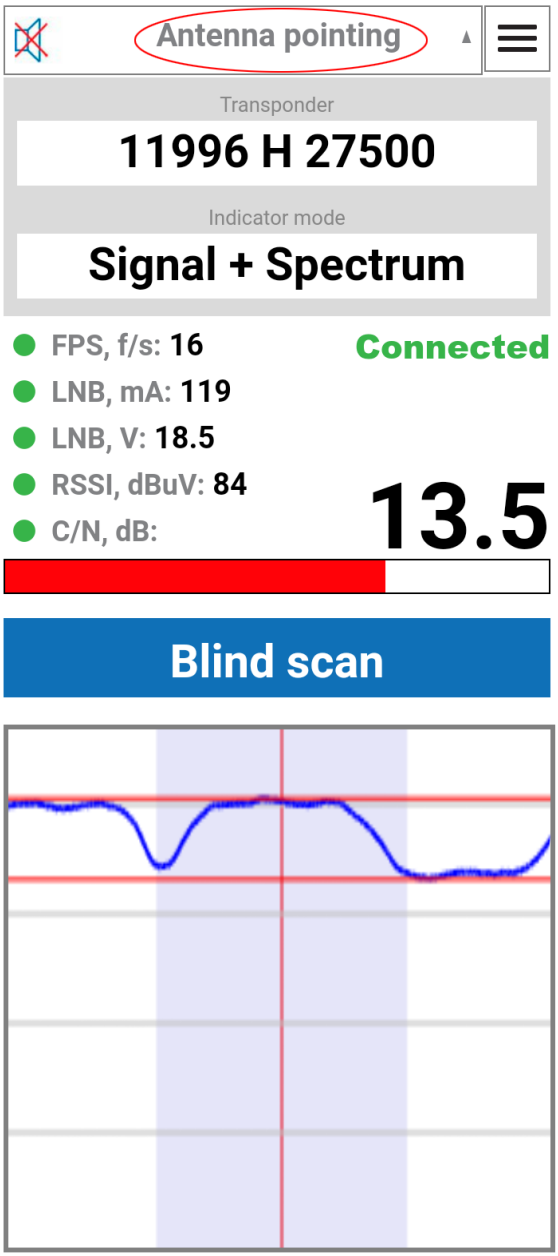
This is followed by a conventional LNB designation with a scale of the rotation angle. Almost all LNBs have such scales printed on the body. Using this scale, it is necessary to set the angle of LNB rotation in the LNB holder for accurate work with linear signal polarizations.

In the Transponder field, a transponder is selected from the list, according to the tuned satellite parameters. It is recommended to make sure that the transponder is working and has a sufficient signal level for the receiving location. This data can be obtained from the satellite operator.

The indicator mode allows you to select the appropriate option that will be used when pointing the antenna. Signal – displays only the level of the signal-to-noise ratio in dB with an interactive scale drawing. Signal + Spectrum – additionally displays the spectrum. This mode is a priority for dish pointing, since it makes it easier to find the satellite by displaying the spectrum. Quality – displays only the level of the carrier-to-noise ratio in dB with an interactive scale drawing. It is used for the final accurate signal tuning.



When a signal is found, the button Blind scan is used to obtain satellite parameters in order to make sure that the antenna is pointing at the required satellite, and not at the nearby one.



The Antenna pointing button at the top collapses the coordinates and the map, which are not required when adjusting the antenna, and so you do not need to be distracted by them.

Additionally, you can display diagnostic parameters by clicking on the colored circles row.

FPS – the speed of network packets exchange between the smartphone and the receiver in frames per second, allows you to control the quality of communication with the receiver. In case of insufficient communication quality (yellow or red), it is recommended to come closer to the receiver or router through which the communication is carried out;

LNB, mA – current consumed by the LNB, in mA;

LNB, V – voltage across the LNB, in V;

RSSI – received signal level, in dBuV;

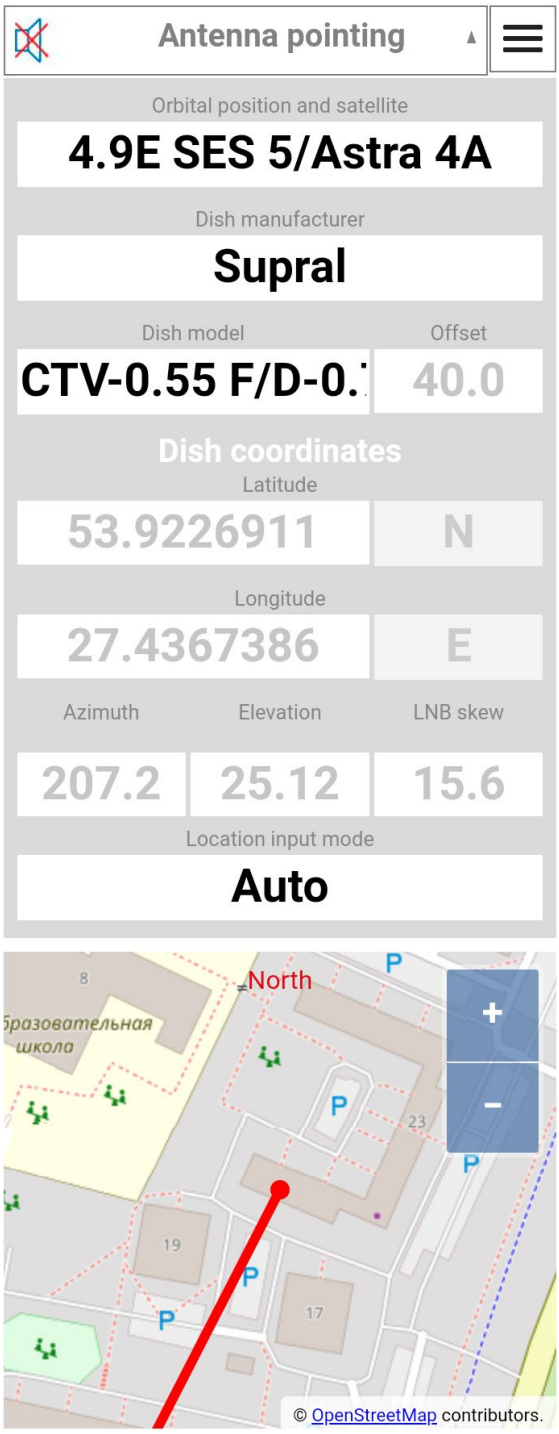
C/N – carrier-to-noise ratio in dB (received signal quality level).

7.2.2. Dish pointing with 3D LNB

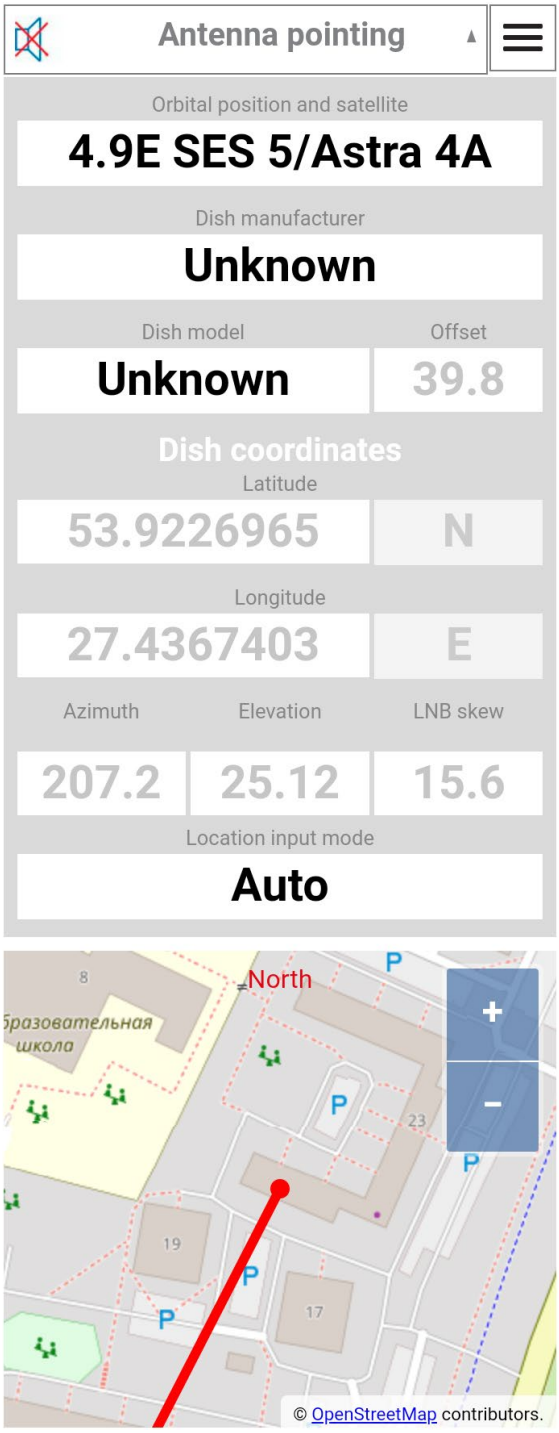
For this purpose, a satellite dish with a 3D LNB installed is connected to the receiver. Beforehand, for the required satellite in the antenna settings, it is necessary to enable the use of the 3D LNB and enter its serial number. The serial number is used to keep track of the factory LNB calibrations.

Pointing a dish with 3D LNB is completely identical to pointing an antenna with a standard LNB, except for two points.

The first point is the indication of the dish manufacturer and the choice of the dish model.



These parameters are used to obtain the offset angle of the antenna used. This angle is then used to measure the antenna tilt angle for a specific satellite. In case an unknown antenna is used, an unknown manufacturer and an unknown antenna are selected. Further, when accurately pointing the antenna to the selected satellite, the application will display the offset angle (also called the offset or elevation angle).



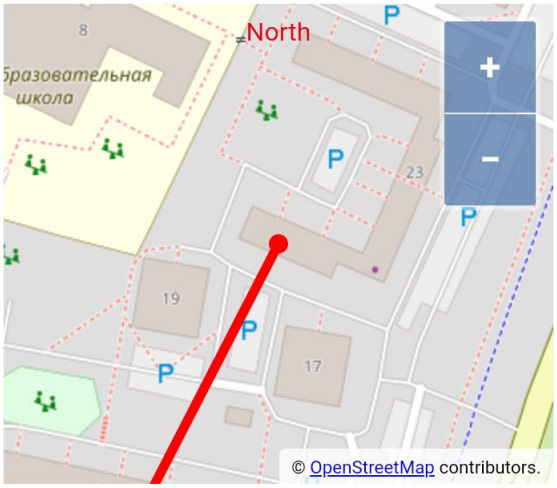
This angle can be used to add your dish to the application and perform pointing with a 3D LNB to any satellites.

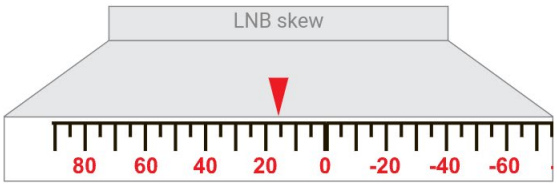
The second point is the presence of two interactive scales that display the LNB skew angle and the dish tilt angle.

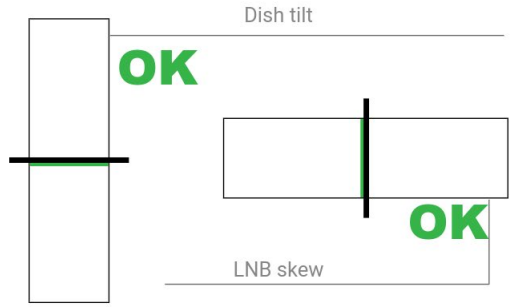
First, you need to set the LNB skew angle. To do this, you need to achieve the appearance of the inscription OK on the LNB skew scale. This will mean setting the correct LNB rotation angle for the satellite being tuned.

Further, by adjusting the antenna "up and down", you need to reach the OK inscription on the dish tilt angle scale. This will mean setting the correct antenna tilt angle for the satellite being tuned.

To complete the antenna tuning, it remains only to turn the antenna left and right until the maximum signal level is reached, and make sure that the required satellite is found. If the satellite differs from the desired one, then the antenna is re-adjusted by shifting left and right until the desired satellite is found.

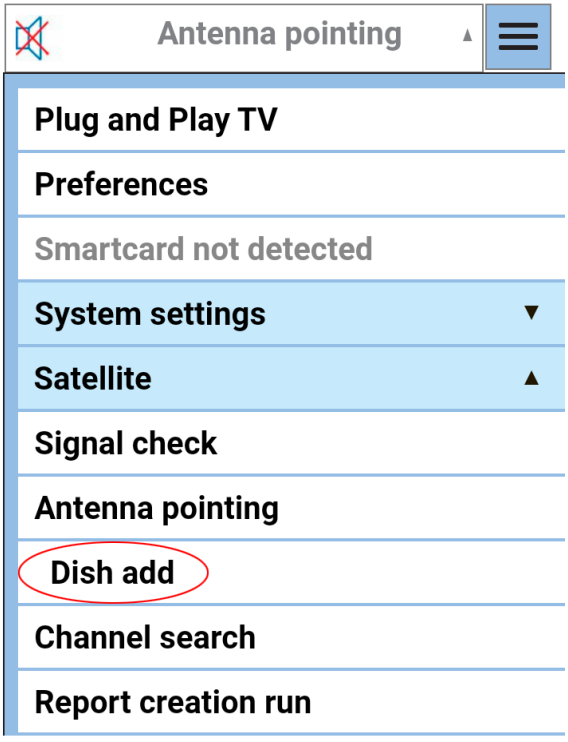




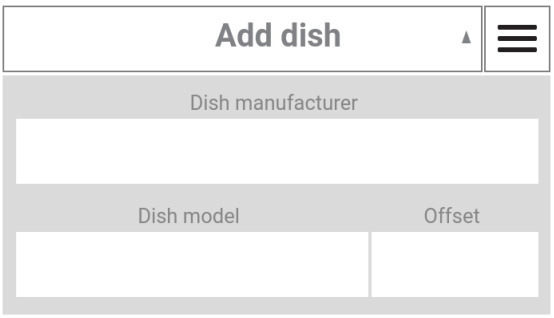


7.2.3. Adding a dish

This section of the menu will be displayed in the application after specifying an unknown dish in Dish pointing (when using a 3D LNB). Serves to add a satellite dish of an unknown manufacturer and model (that is, which is not in the application).

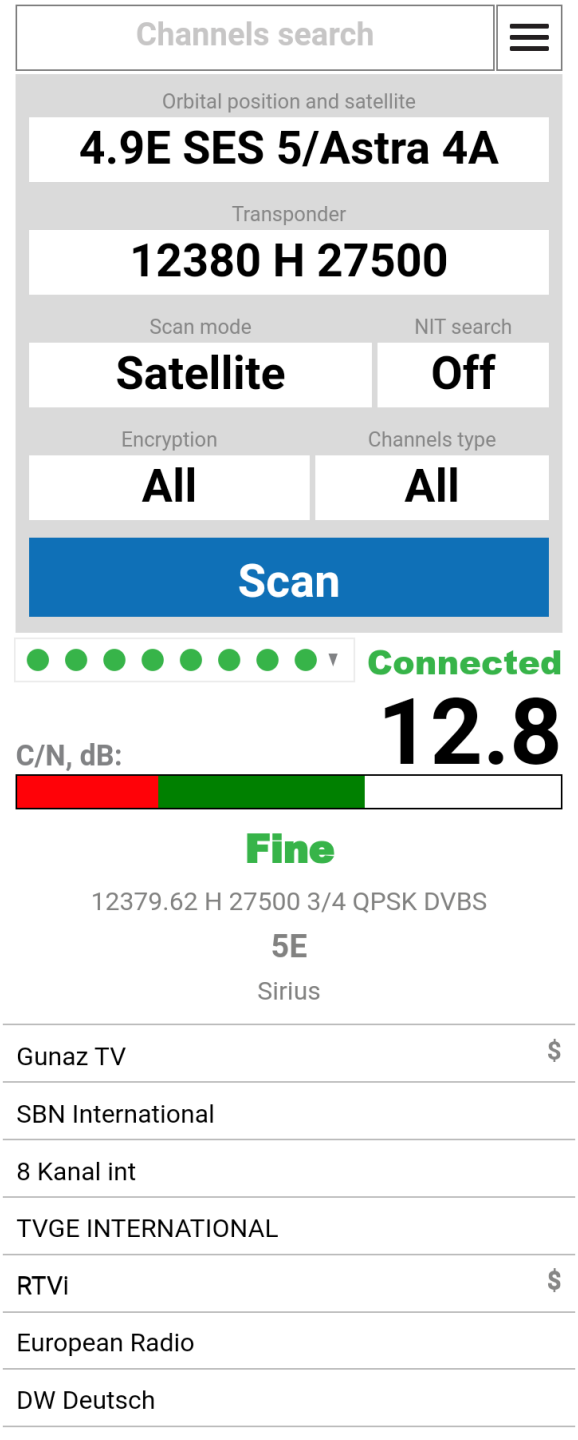


It enters data in the appropriate fields for the unknown dish: dish manufacturer, dish model and offset (offset angle). After that, the added dish can be selected in the Dish pointing using the 3D LNB. Also, this dish will be displayed in the completed report.



7.3. Scanning channels from the satellite

The Channel search section allows you to scan the selected satellite or transponder.



First, select the satellite on which you will scan the channels.

Then select the scan mode – Satellite, Transponder or Blind.

Network search (NIT) – when enabled, it allows you to scan the operator's channels according to the information present in the network.

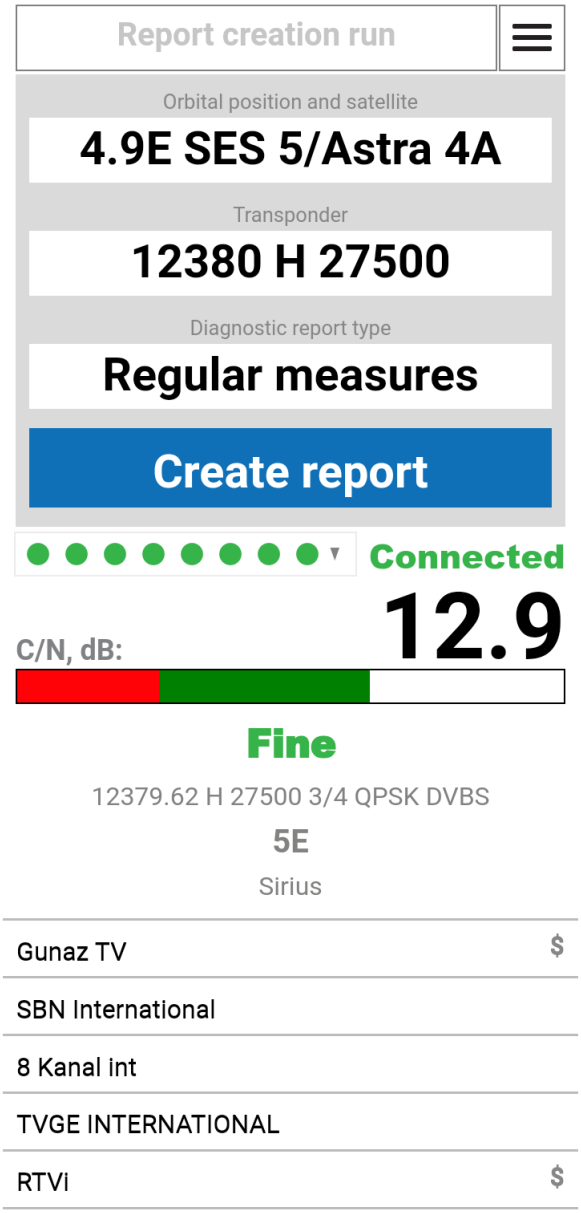
Encryption – allows you to scan all channels or only open ones.

Channels type – allows you to scan all channels, or only TV, or only radio channels.

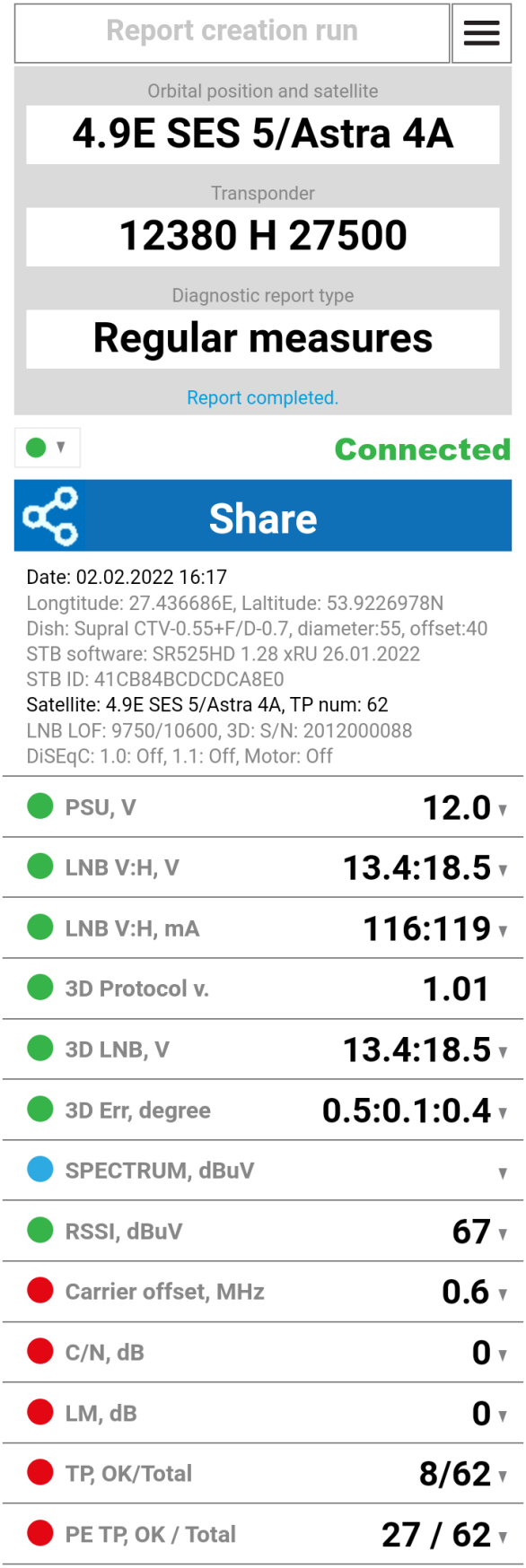
After completing the parameter settings, click the button - Scan to directly search for channels.

7.4. Creating and sending the report

The reports creation is carried out both in order to determine the dish tuning quality, and in subsequent operation to identify the causes that affect the deterioration of the signal reception quality or lead to system malfunctions.

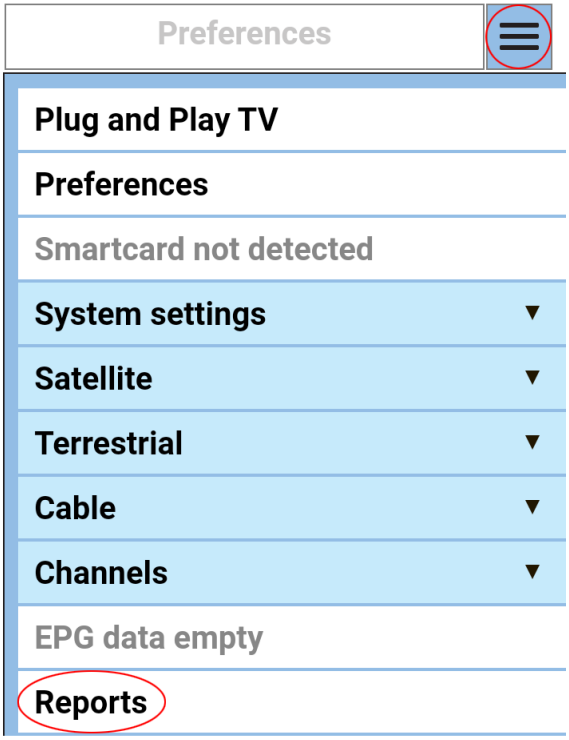


To start making a report, you need to select a satellite and the type of diagnostics – Regular measurements, Reference at the antenna or Reference in the room. After that, you need to push Create report button to start diagnostics. During the report creation, the interactive scale with the report readiness stage will be displayed.



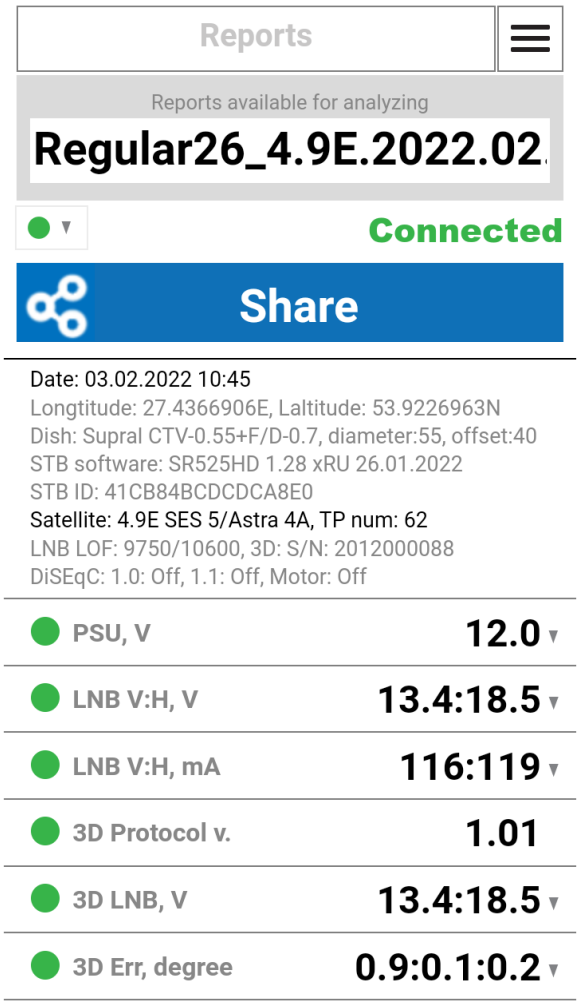
After diagnostic report creation, it can be sent to the operator or installer via e-mail or messengers. To do this, just click the Share button and select a sending method. You can also check all the parameters by yourself.

The last executed reports are stored in the receiver's memory and can be accessed through the Reports section. They have a convenient marking, which encrypts: type of diagnostic check, orbital position, date and time of the report.



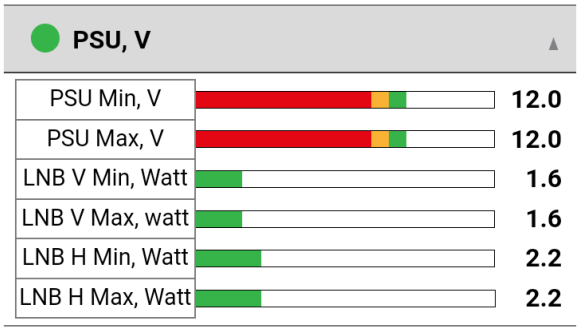
7.4.1. Report parameters

Each report contains: the date of creation, the coordinates of the dish installation, the manufacturer and model of the antenna, the version of the receiver software, the serial number of the receiver, the satellite parameters, the LNB frequencies, the serial number of the 3D LNB (if it is used), the DiSEqC and motor settings (if any is used).



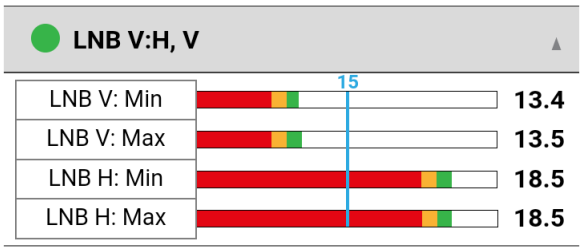
Below are the tabs with detailed measurements of the parameters, and a colored circle with a diagnostic conclusion is displayed in front of their name. Green – no problems identified, Yellow – worth paying attention to, Red – problems identified, Blue – informational in nature.

PSU, V – receiver power supply parameters.



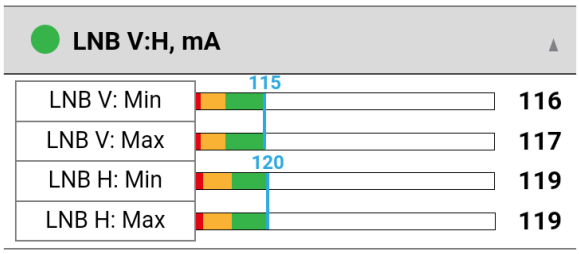
Displays the minimum and maximum voltage of the power supply, as well as the power consumption of the LNB for two polarizations. Finding the scales in green areas means no problem.

LNB V:H, V – LNB supply voltage parameters.



Displays the minimum and maximum LNB supply voltages for two polarizations.

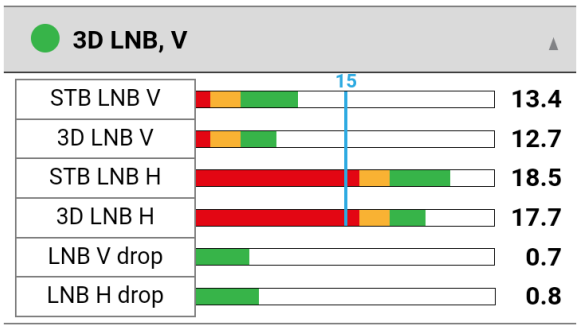
LNB V:H, mA – LNB current consumption parameters.



Displays the minimum and maximum currents consumed by the LNB for two polarizations for the low and high bands.

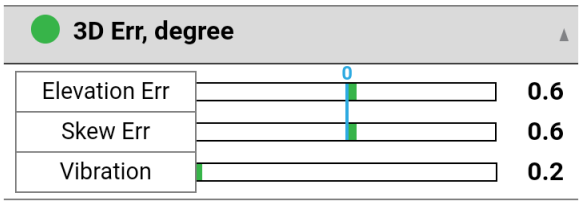
3D Protocol v. – in case of using a 3D LNB, it shows the protocol version.

3D LNB – in the case of using a 3D LNB, it shows the supply voltages measured on the LNB itself.



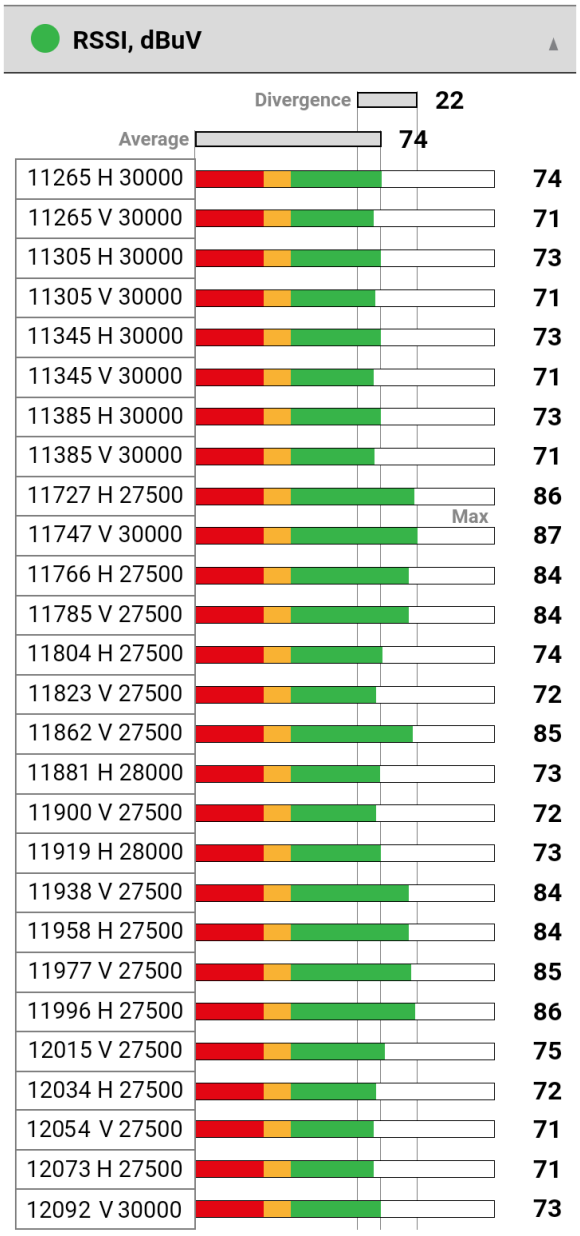
Displays the minimum and maximum LNB supply voltages for two polarizations and two bands, measured both at the receiver input and on the LNB itself. Also shows voltage loss on coaxial cable.

3D Err, degree – in the case of using a 3D LNB, it shows errors in setting angles and the presence of antenna vibration.



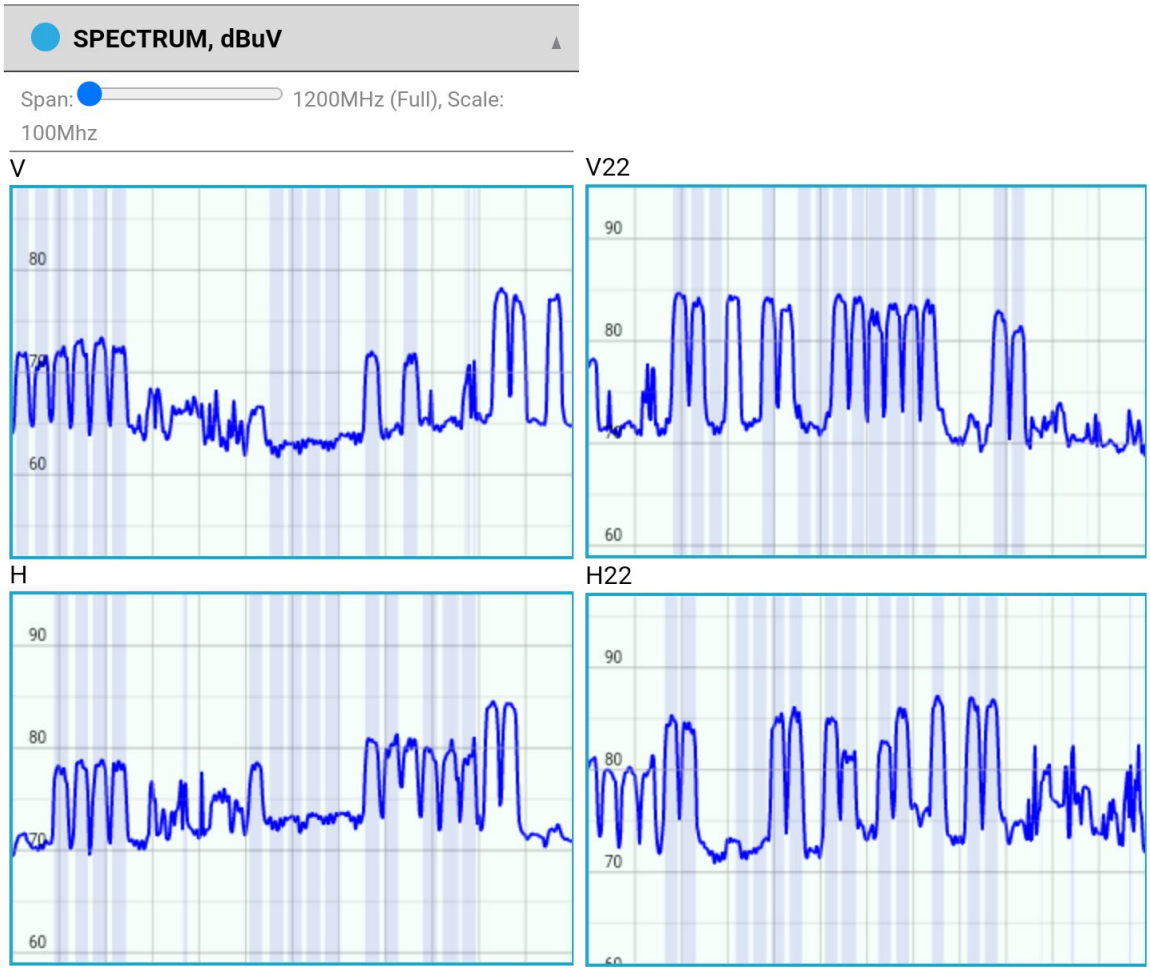
Using these angles, you can accurately determine the antenna elevation error and the LNB rotation error. Which indicates the accuracy of the antenna alignment to the satellite. The vibration of the antenna, which is influenced by the wind, is also measured.

RSSI, dBuV – signal levels of transponders.



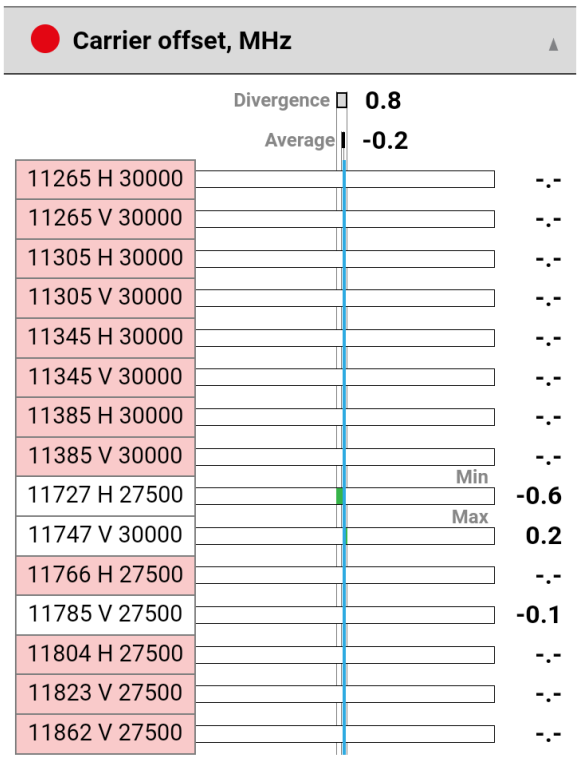
Divergence – the difference between the maximum and minimum signal levels on transponders. Average – average value of signal levels.

Spectrum, dBuV – satellite signals spectrum



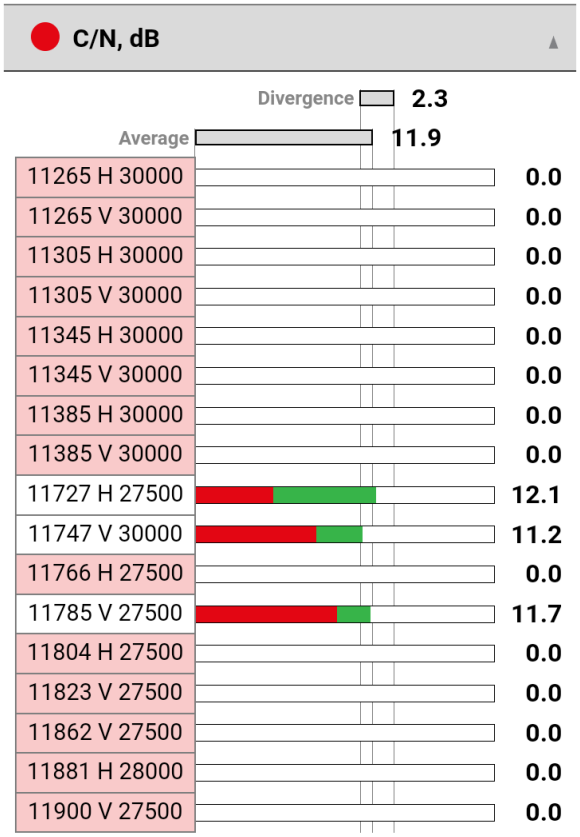
Displays four plots of satellite spectra for two frequency bands and polarizations. The Span button allows to change the frequency band.

Carrier offset, MHz – the frequencies deviation of the LNB local oscillators.



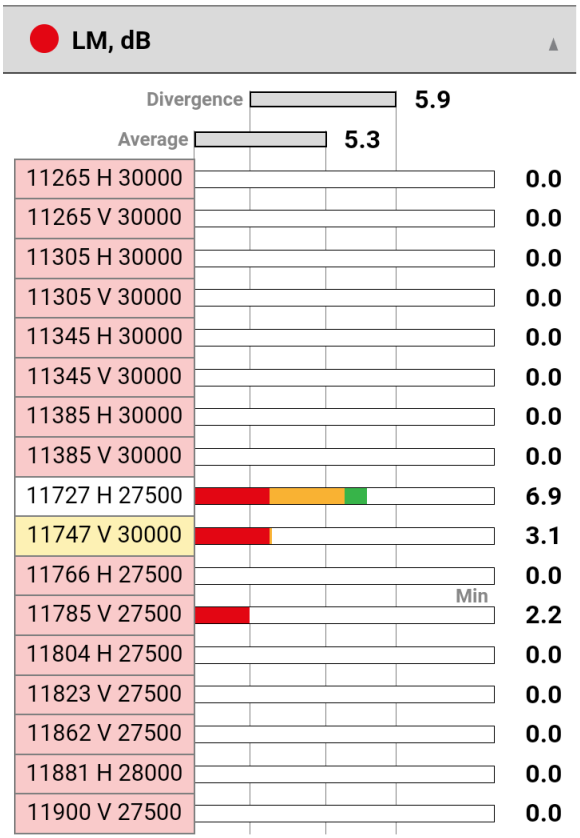
Divergence – the difference between the maximum and minimum frequency deviation on transponders. Average – the average value of the frequency deviation.

C/N, dB – carrier-to-noise ratio levels.



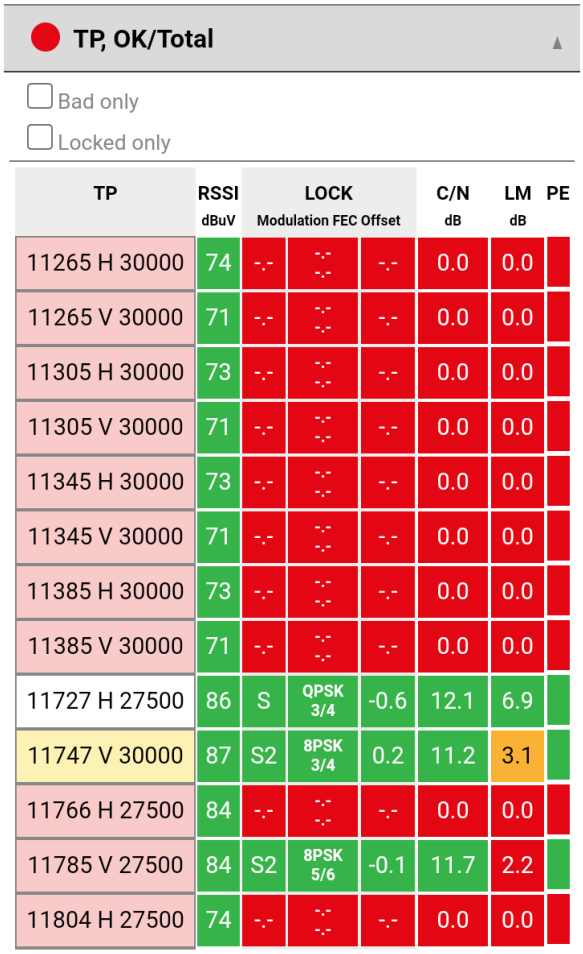
Divergence is the difference between the maximum and minimum levels of the carrier to noise on the transponders. Average – average value of the carrier-to-noise levels.

LM, dB – the level of the received signal margin.



Divergence – the difference between the maximum and minimum levels of the received signal margin on the transponders. Average – the average value of the received signal margin.

TP, OK/Total – table of the main parameters of transponders.



TP, OK/Total

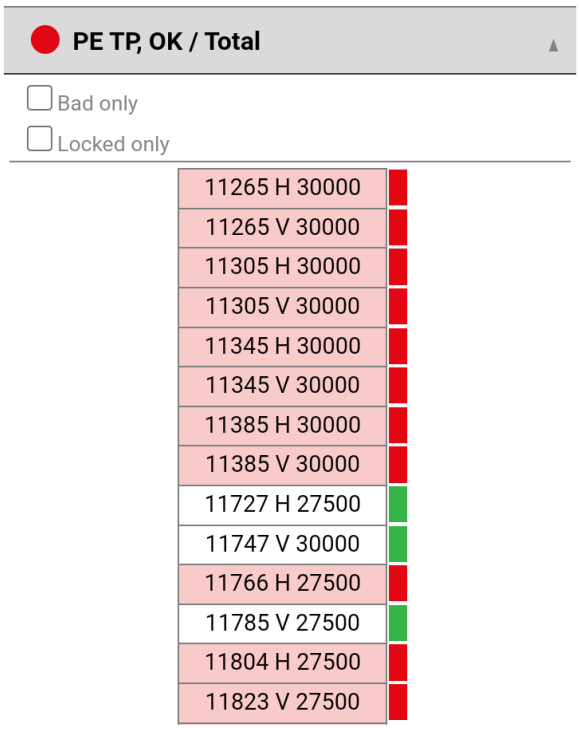
Bad only

Locked only

TP	RSSI dBuV	LOCK Modulation	FEC	Offset	C/N dB	LM dB	PE
11265 H 30000	74	-.-	-:- -:-	-.-	0.0	0.0	
11265 V 30000	71	-.-	-:- -:-	-.-	0.0	0.0	
11305 H 30000	73	-.-	-:- -:-	-.-	0.0	0.0	
11305 V 30000	71	-.-	-:- -:-	-.-	0.0	0.0	
11345 H 30000	73	-.-	-:- -:-	-.-	0.0	0.0	
11345 V 30000	71	-.-	-:- -:-	-.-	0.0	0.0	
11385 H 30000	73	-.-	-:- -:-	-.-	0.0	0.0	
11385 V 30000	71	-.-	-:- -:-	-.-	0.0	0.0	
11727 H 27500	86	S	QPSK 3/4	-0.6	12.1	6.9	
11747 V 30000	87	S2	8PSK 3/4	0.2	11.2	3.1	
11766 H 27500	84	-.-	-:- -:-	-.-	0.0	0.0	
11785 V 27500	84	S2	8PSK 5/6	-0.1	11.7	2.2	
11804 H 27500	74	-.-	-:- -:-	-.-	0.0	0.0	

This table contains listing of transponder parameters, their signal levels, link margin, as well as the presence of errors in transmitted packets.

PE TP, OK/Total – information about the presence of packet errors on transponders.



PE TP, OK / Total

Bad only

Locked only

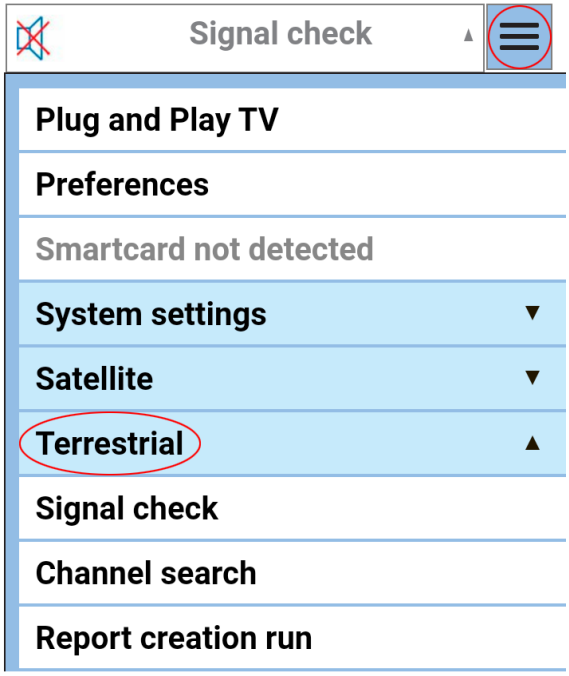
11265 H 30000
11265 V 30000
11305 H 30000
11305 V 30000
11345 H 30000
11345 V 30000
11385 H 30000
11385 V 30000
11727 H 27500
11747 V 30000
11766 H 27500
11785 V 27500
11804 H 27500
11823 V 27500

This table lists transponders that have errors in transmitted packets at demodulator output, eque of freezes.

8. Terrestrial TV (DVB-T/T2)

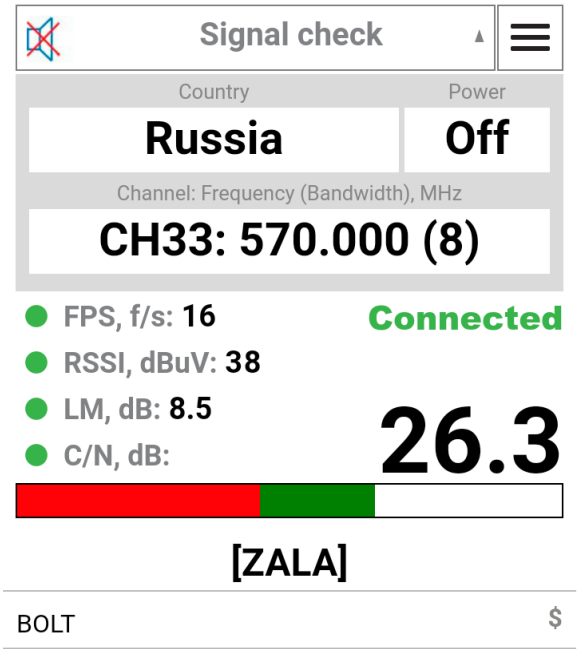
Attention! The section on Terrestrial TV is relevant only for those models that have an appropriate tuner for receiving DVB-T/T2.

In this section of the application menu, you can configure the terrestrial antenna, fine-tune it to the TV station, scan the terrestrial channels, and also make the technical condition report.



8.1. Signal check

This section is used to perform antenna tuning and pointing - specifying the reception region, enabling active terrestrial antenna support and selecting the received multiplex. When you first open this section after installing the application, you must allow access to determine your location.



Country – select the country in which broadcast channels are received from the drop-down list;

Power – allows you to turn on the 5V supply voltage to the active antenna amplifier. In the case of using a short-circuited antenna without an amplifier, applying power to it will cause a short circuit and display a warning on the TV screen;

Channel Frequency (Bandwidth) – selects the multiplex frequency on which DVB-T/T2 channels are broadcast in your area.

Additionally, diagnostic parameters can be displayed for the received multiplex by clicking on a series of colored circles.

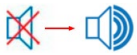
FPS – the speed of exchanging network packets of a smartphone with a receiver (in frames per second), allows you to control the quality of communication with the receiver. If the connection quality is insufficient (yellow or red), it is recommended to get closer to the receiver or router through which wireless communication is carried out;

RSSI – received signal level in dBµV;

LM – received signal margin level in dB;

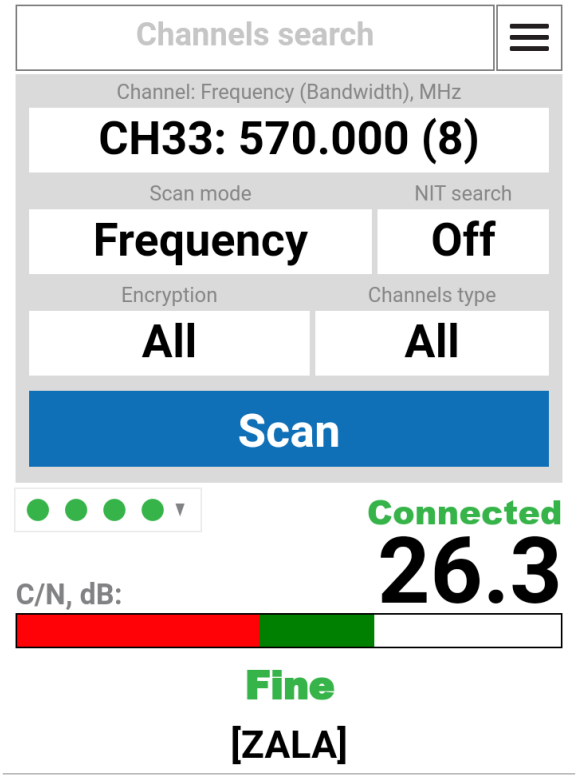
C/N – carrier-to-noise ratio in dB (received signal quality level).

The principle of directing a DVB-T/T2 antenna is to connect it with a coaxial cable to the receiver, put the required Country, switch on the power (for the active antenna only) and select the current multiplex, which will be used to tune the antenna. Further, by moving the antenna to the left/right and lower/higher, it is necessary to achieve the maximum C/N level. It is recommended to fix the antenna in this position. Finer antenna tuning is recommended to be performed using signals from several multiplexes.



There is a speaker icon in the upper left corner, if you click on it, a tonal sound will appear, proportional to the received signal level. This makes it easier to point the terrestrial antenna without visual control of the application.

8.2. Channel search



The channels search section allows you to scan the selected multiplex or all multiplexes.

Channel: Frequency. Select the frequency of the multiplex on which broadcasting is performed and on which you will check the level of the received signal.

Then select the Scan mode – Frequency or All frequencies. If you select a Frequency value, the search for channels will be performed only at the specified frequency. If you select All frequencies, the channel will be searched for all available frequencies.

NIT search – when enabled, it allows you to scan the operator's channels according to the information present in the network.

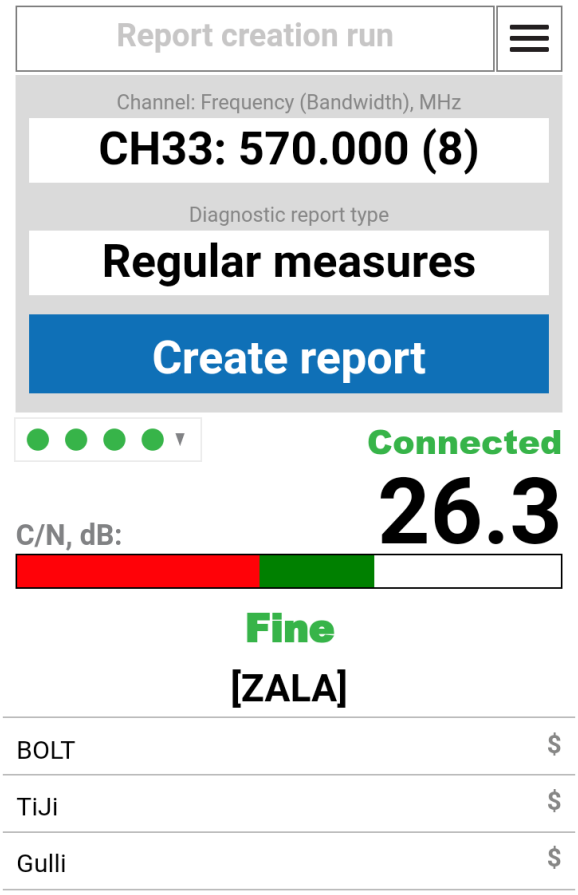
Encryption – allows you to scan all channels or only open ones.

Channels type – allows you to scan all channels, or only TV channels, or only radio channels.

After completing the parameter settings, press the button – Scan to directly search for channels.

8.3. Creating and sending the report

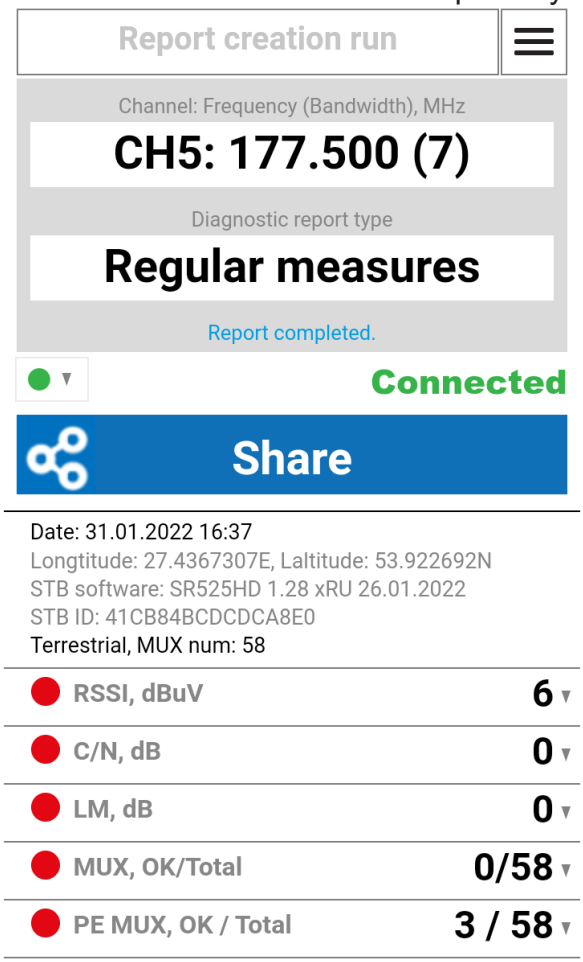
Reports creation is carried out both in order to determine the quality of the initial tuning of the DVB-T/T2 antenna, and in the future to identify the causes that affect the deterioration in the quality of signal reception or lead to system malfunctions.



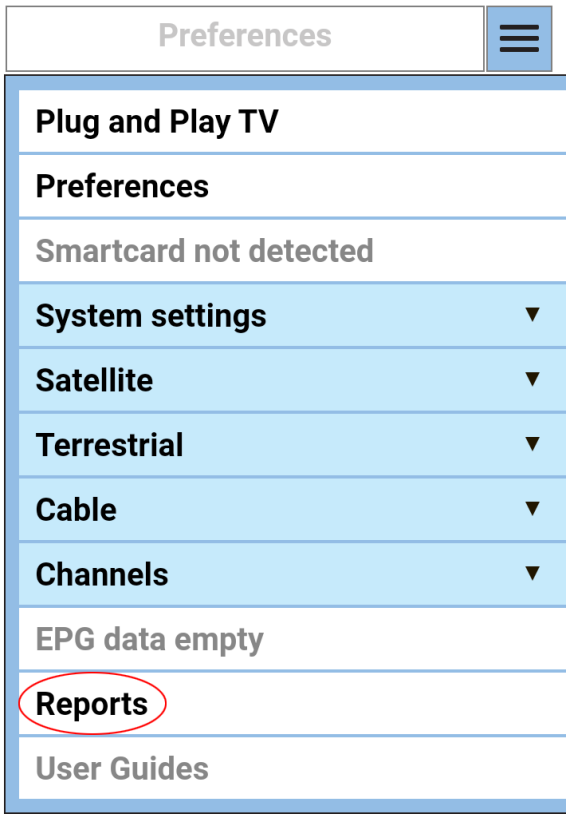
To run a report, you must specify the Diagnostic report type – Regular measures, Sample on the roof or Sample in the room. After that, the button is pressed – Create report to start the diagnostics.

During diagnostics, the type of measurements and an interactive scale with the stage of report readiness will be displayed.

After the diagnostic report is completed, it can be sent to the operator or installer via e-mail or messengers. To do this, just click the button – Share and select the method of sending. You can also check out all the options yourself.

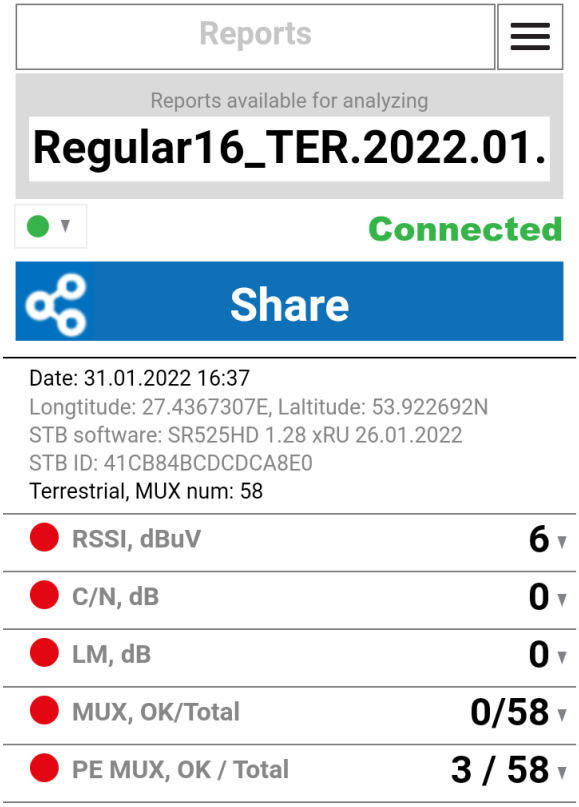


The last completed reports are stored in the receiver's memory, and they can be accessed through the section – Reports. They have a convenient marking that specifies: the type of diagnostic test, on-air television, the date and time the report was taken.



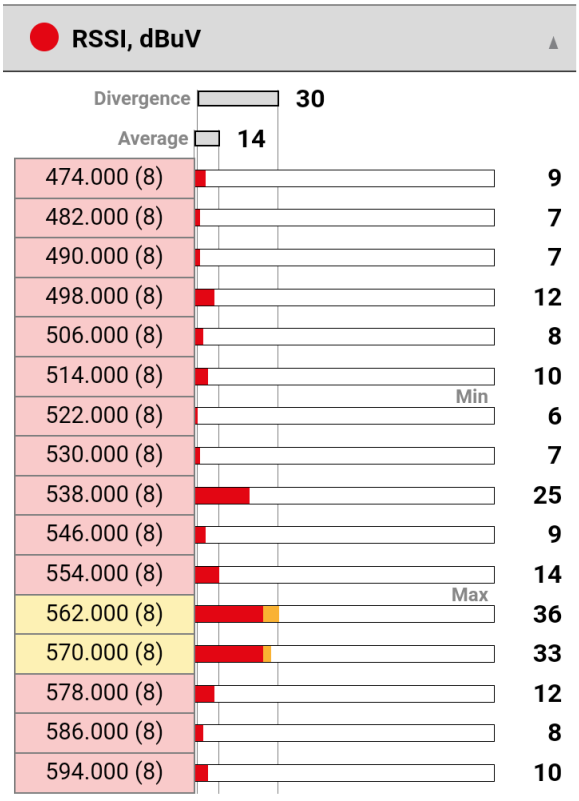
8.3.1 Report parameters

Each report contains: creation date, antenna installation coordinates, receiver software version, receiver serial number and number of multiplexes.



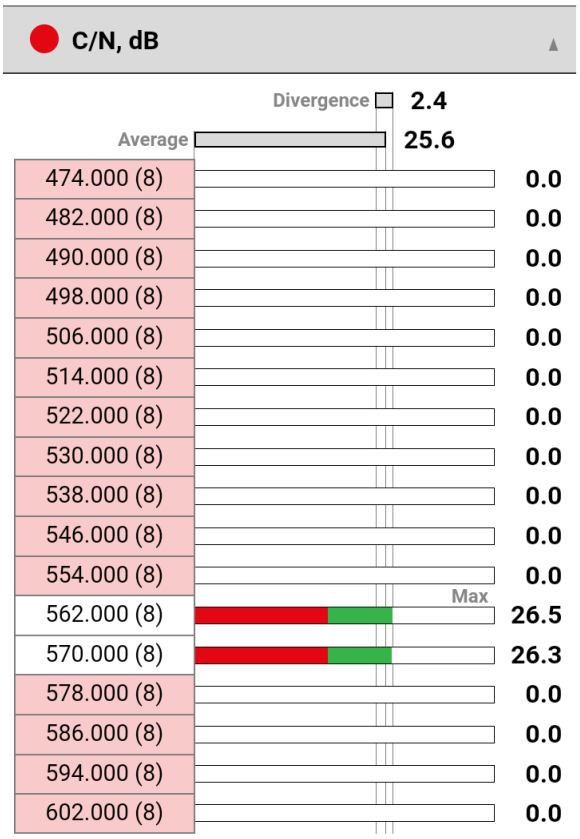
Below are tabs with detailed measurements of parameters, and before their name a colored circle with a diagnostic conclusion is displayed. Green – no problems identified, Yellow – attention to be paid, Red – problems identified.

RSSI, dBuV – multiplexes signal levels.



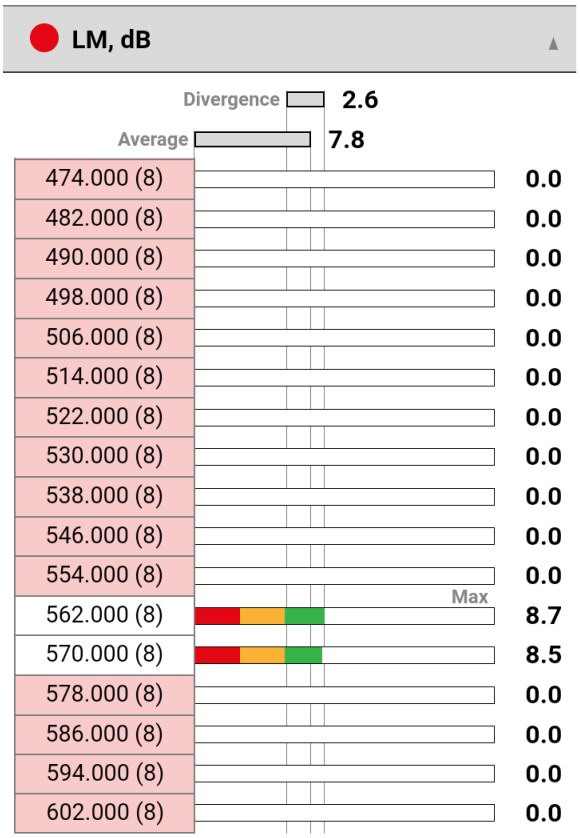
Divergence – the difference between the maximum and minimum signal levels on the multiplexes. Average – the average value of the signal levels.

C/N, dB – carrier-to-noise levels.



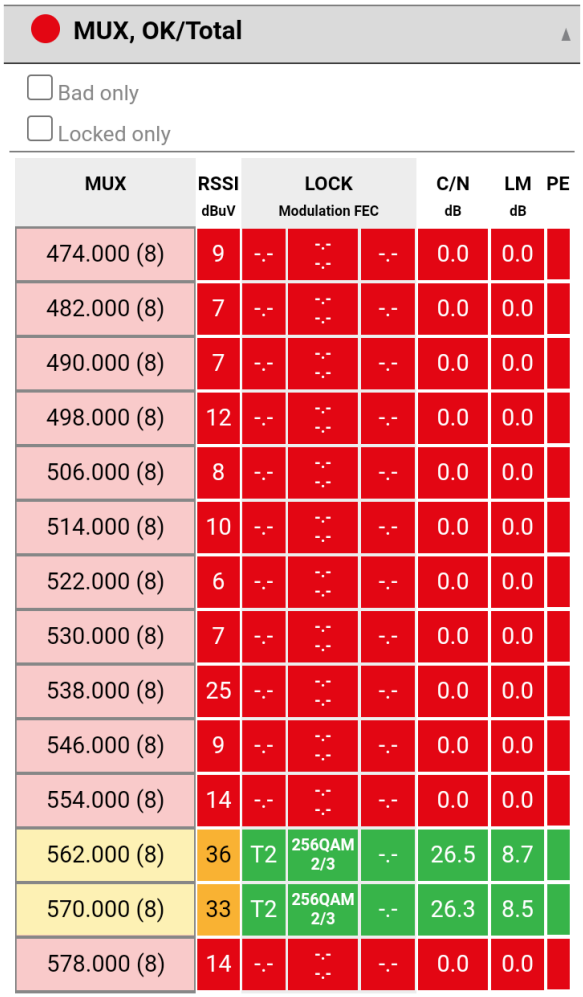
Divergence – difference between maximum and minimum carrier-to-noise levels on multiplexes. Average – average carrier-to-noise levels.

LM, dB – signal margin levels.



Divergence – the difference between the maximum and minimum signal margin levels on multiplexes. Average – the average value of the signal margin levels.

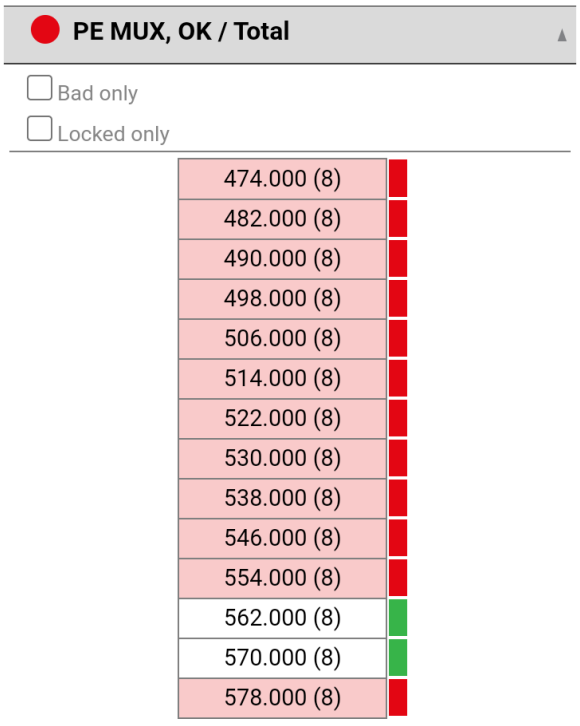
MUX, OK/Total – table of basic parameters of multiplexes.



MUX	RSSI dBuV	LOCK Modulation	FEC		C/N dB	LM dB	PE
474.000 (8)	9	-.-	-:- -.-	-.-	0.0	0.0	
482.000 (8)	7	-.-	-:- -.-	-.-	0.0	0.0	
490.000 (8)	7	-.-	-:- -.-	-.-	0.0	0.0	
498.000 (8)	12	-.-	-:- -.-	-.-	0.0	0.0	
506.000 (8)	8	-.-	-:- -.-	-.-	0.0	0.0	
514.000 (8)	10	-.-	-:- -.-	-.-	0.0	0.0	
522.000 (8)	6	-.-	-:- -.-	-.-	0.0	0.0	
530.000 (8)	7	-.-	-:- -.-	-.-	0.0	0.0	
538.000 (8)	25	-.-	-:- -.-	-.-	0.0	0.0	
546.000 (8)	9	-.-	-:- -.-	-.-	0.0	0.0	
554.000 (8)	14	-.-	-:- -.-	-.-	0.0	0.0	
562.000 (8)	36	T2	256QAM 2/3	-.-	26.5	8.7	
570.000 (8)	33	T2	256QAM 2/3	-.-	26.3	8.5	
578.000 (8)	14	-.-	-:- -.-	-.-	0.0	0.0	

This table contains listing of parameters of multiplexes, their signal levels, signal margin, as well as the presence of errors in transmitted packets.

PE MUX, OK/Total – information about the presence of errors in packets on multiplexes.



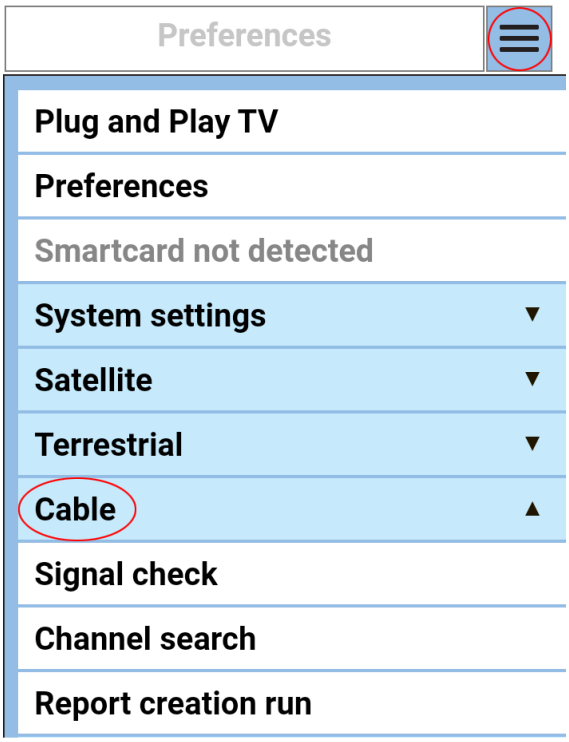
474.000 (8)
482.000 (8)
490.000 (8)
498.000 (8)
506.000 (8)
514.000 (8)
522.000 (8)
530.000 (8)
538.000 (8)
546.000 (8)
554.000 (8)
562.000 (8)
570.000 (8)
578.000 (8)

This table lists multiplexes that have errors in transmitted packets.

9. Cable TV (DVB-C)

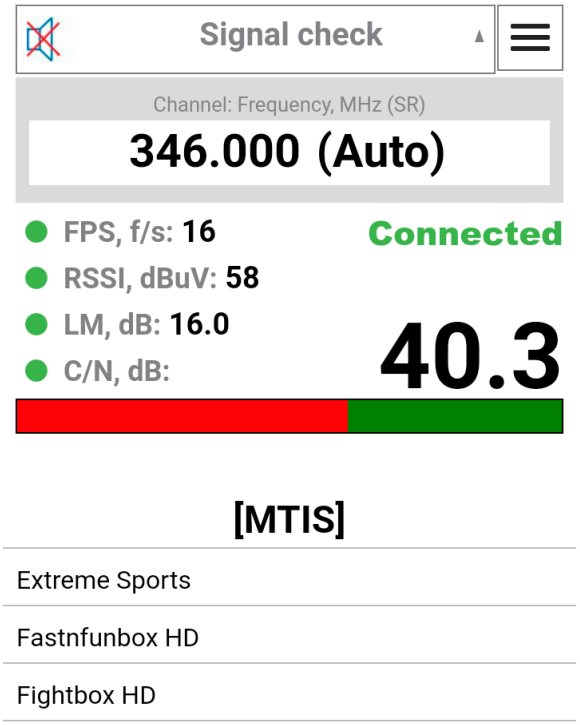
Attention! The section on cable TV is relevant only for those models that have an appropriate tuner for receiving DVB-C.

In this section of the application menu, you can check the signal levels of cable TV multiplexes, scan cable channels, and also create a technical report.



9.1. Signal check

This section is used to perform a quality check on the received signal from the specified multiplex. It is enough to specify only the multiplex frequency, modulation and symbol rate are determined automatically. When you first open this section after installing the application, you will be asked to allow access to the location.



Channel – select the frequency of the multiplex on which broadcasting is performed and on which you will check the level of the received signal.

Additionally, diagnostic parameters can be displayed for the received multiplex by clicking on a series of colored circles.

FPS – the speed of exchanging network packets of a smartphone with a receiver (in frames per second), allows you to control the quality of communication with the receiver. If the connection quality is insufficient (yellow or red), it is recommended to get closer to the receiver or router through which wireless communication is carried out;

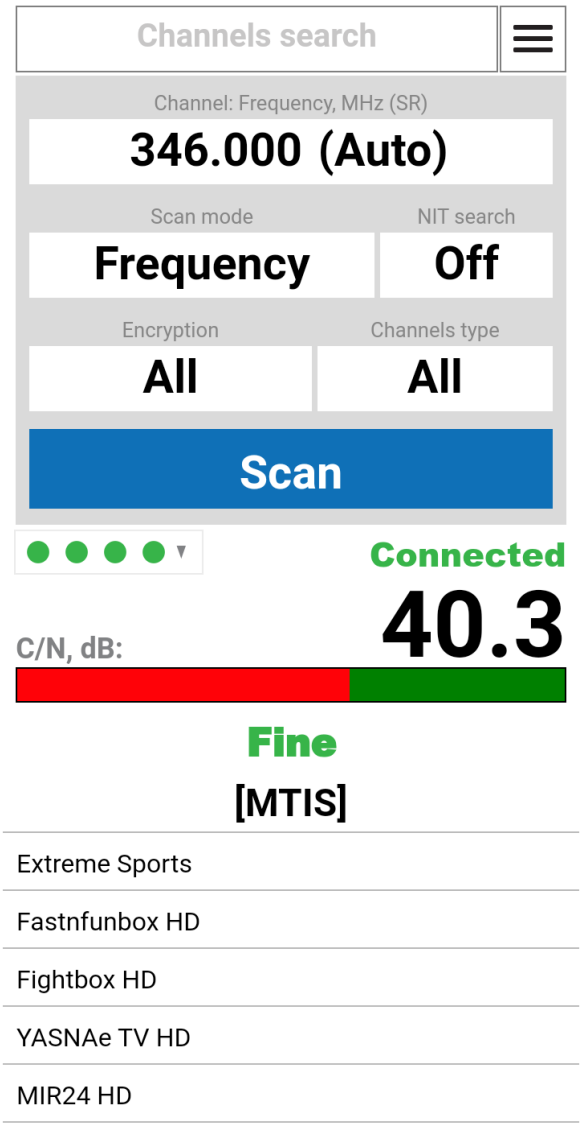
RSSI – received signal level in dBµV;

LM – received signal margin level in dB;

C/N – carrier-to-noise ratio in dB (received signal quality level).

9.2. Channel search

The Channel search section allows you to scan the selected multiplex or all multiplexes.



Channel – first select the multiplex frequency on which you want to scan the channels.

Then select the Scan mode – Frequency or All frequencies. If you select Frequency, channels will be searched only on the specified frequency. If you select All Frequencies, the channel will be searched for all available frequencies.

NIT search – when enabled, it allows you to scan the operator's channels according to the information present in the network.

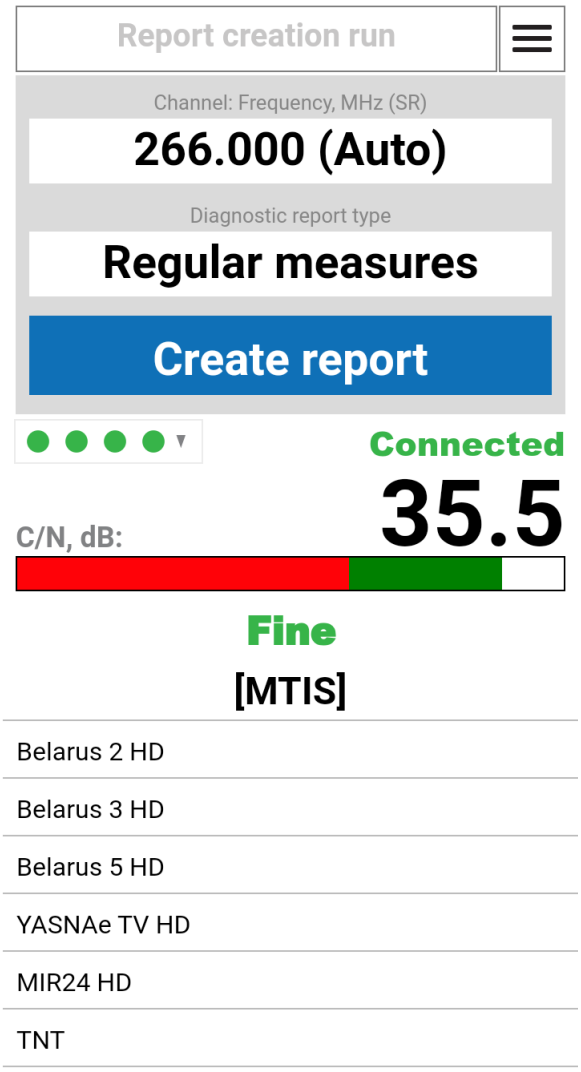
Encryption – allows you to scan all channels or only open ones.

Channels type – allows you to scan all channels, or only TV channels, or only radio channels.

After completing the parameter settings, press the button – Scan to directly search for channels.

9.3. Creating and sending the report

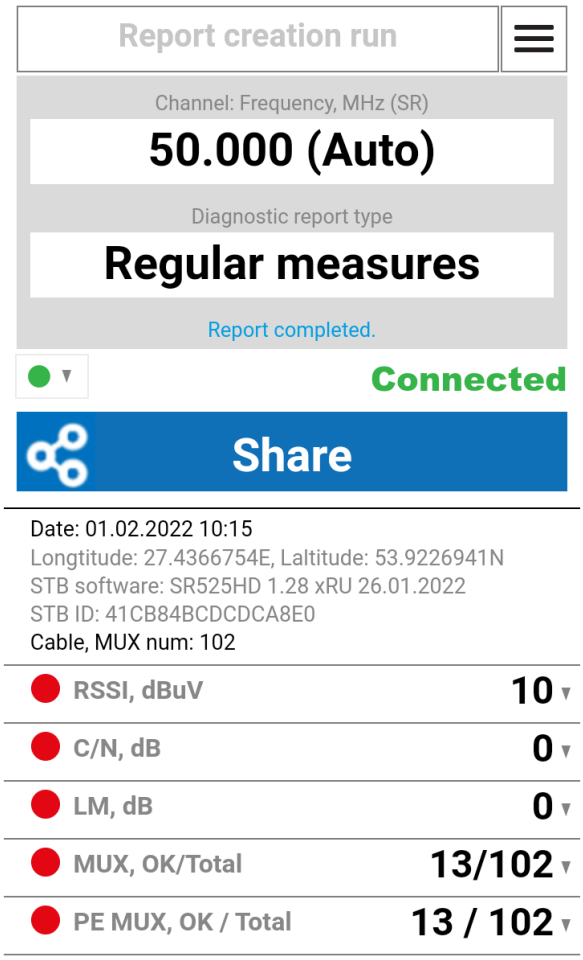
Reports creation is carried out both in order to determine the quality of cable television reception, and in subsequent operation to identify the causes that affect the deterioration in the quality of signal reception or lead to system malfunctions.



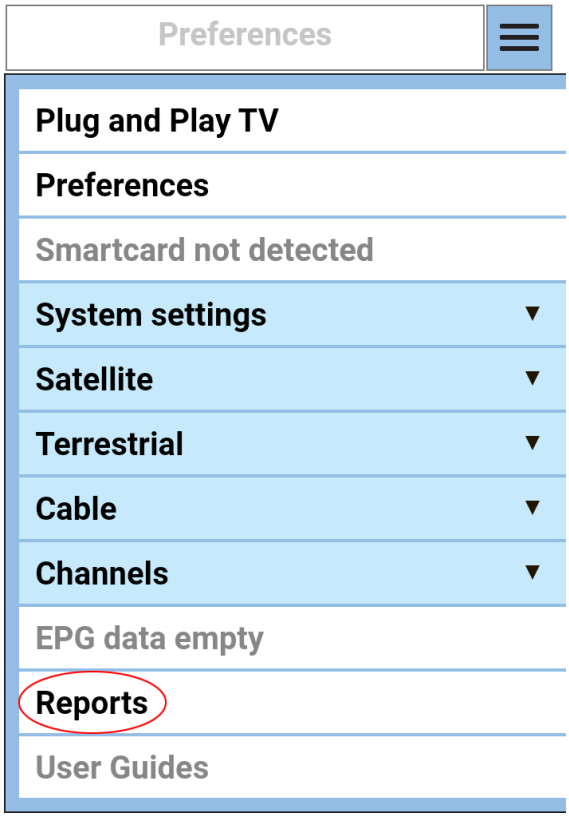
To run a report, you must specify the Diagnostic report type – Regular measures or Sample in the room. After that, the button is pressed – Create report to start the diagnostics.

During diagnostics, the type of measurements and an interactive scale with the stage of report readiness will be displayed.

After the diagnostic report is completed, it can be sent to the operator or installer via e-mail or messengers. To do this, just click the button – Share and select the method of sending. You can also check out all the options yourself.

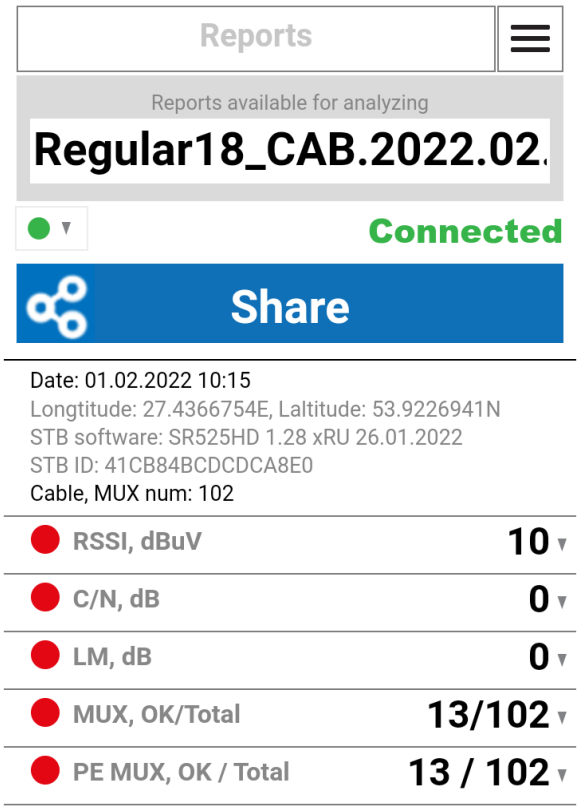


The last completed reports are stored in the receiver's memory, and they can be accessed through the section – Reports. They have a convenient marking that specifies: the type of diagnostic test, cable television, the date and time the report was taken.



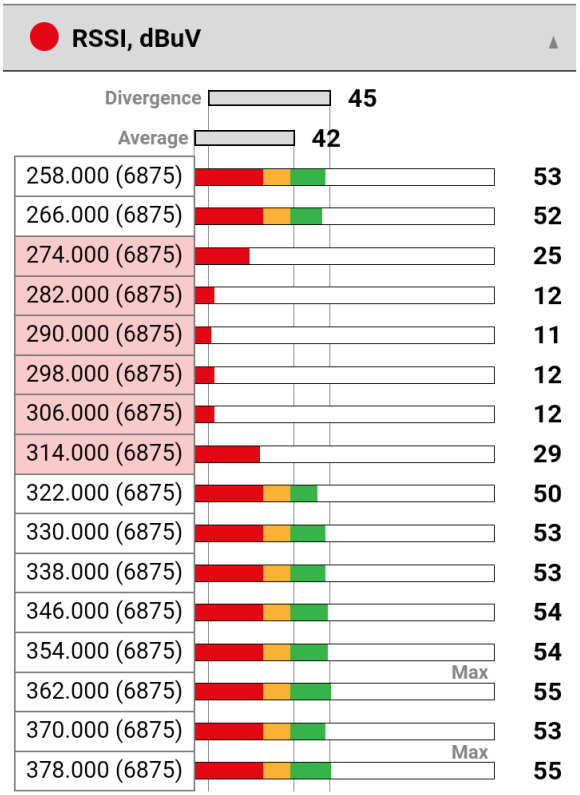
9.3.1 Report parameters

Each report contains: creation date, installation coordinates, receiver software version, receiver serial number and number of multiplexes.



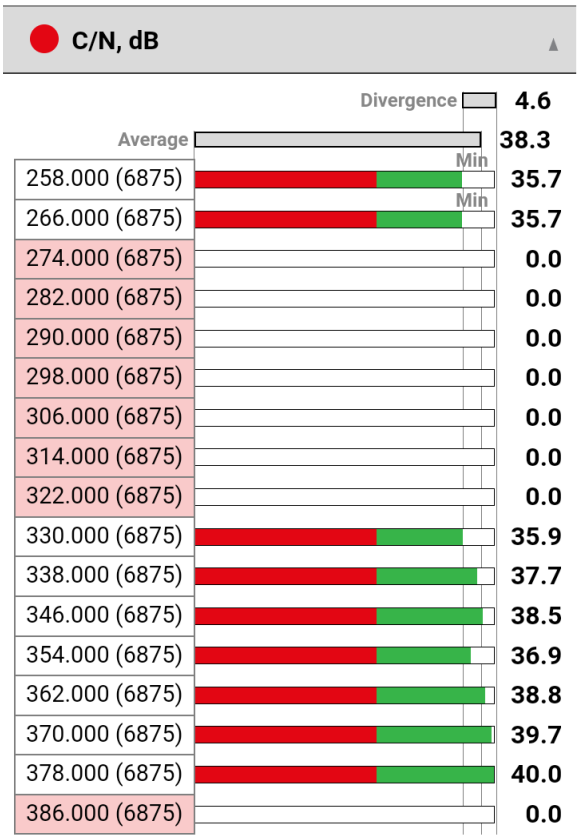
Below are tabs with detailed measurements of parameters, and before their name a colored circle with a diagnostic conclusion is displayed. Green – no problems identified, Yellow – attention to be paid, Red – problems identified.

RSSI, dBuV – multiplexes signal levels.



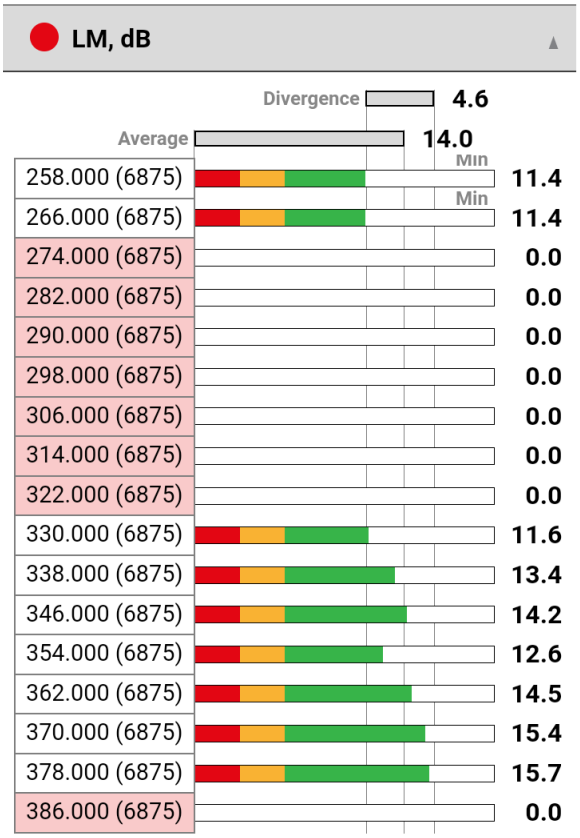
Divergence – the difference between the maximum and minimum signal levels on the multiplexes. Average – the average value of the signal levels.

C/N, dB – carrier-to-noise levels.



Divergence – difference between maximum and minimum carrier-to-noise levels on multiplexes. Average – average carrier-to-noise levels.

LM, dB – signal margin levels.



Divergence – the difference between the maximum and minimum signal margin levels on multiplexes. Average – the average value of the signal margin levels.

MUX, OK/Total – table of basic parameters of multiplexes.

MUX, OK/Total

Bad only

Locked only

MUX	RSSI dBuV	LOCK			C/N dB	LM dB	PE
			Modulation				
258.000 (6875)	53	C	64QAM -.-	-.-	35.7	11.4	
266.000 (6875)	52	C	64QAM -.-	-.-	35.7	11.4	
274.000 (6875)	25	-.-	-.- -.-	-.-	0.0	0.0	
282.000 (6875)	12	-.-	-.- -.-	-.-	0.0	0.0	
290.000 (6875)	11	-.-	-.- -.-	-.-	0.0	0.0	
298.000 (6875)	12	-.-	-.- -.-	-.-	0.0	0.0	
306.000 (6875)	12	-.-	-.- -.-	-.-	0.0	0.0	
314.000 (6875)	29	-.-	-.- -.-	-.-	0.0	0.0	
322.000 (6875)	50	-.-	-.- -.-	-.-	0.0	0.0	
330.000 (6875)	53	C	64QAM -.-	-.-	35.9	11.6	
338.000 (6875)	53	C	64QAM -.-	-.-	37.7	13.4	
346.000 (6875)	54	C	64QAM -.-	-.-	38.5	14.2	
354.000 (6875)	54	C	64QAM -.-	-.-	36.9	12.6	

This table contains listing of parameters of multiplexes, their signal levels, signal margin, as well as the presence of errors in transmitted packets.

PE MUX, OK/Total – information about the presence of errors in packets on multiplexes.

PE MUX, OK / Total

Bad only

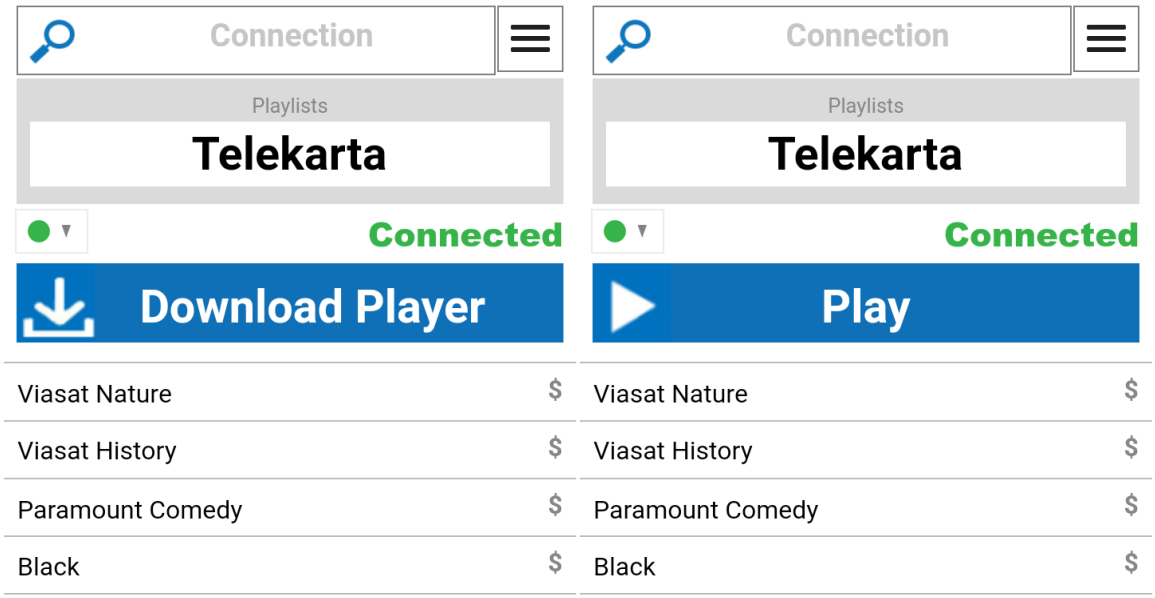
Locked only

258.000 (6875)
266.000 (6875)
274.000 (6875)
282.000 (6875)
290.000 (6875)
298.000 (6875)
306.000 (6875)
314.000 (6875)
322.000 (6875)
330.000 (6875)
338.000 (6875)
346.000 (6875)
354.000 (6875)
362.000 (6875)
370.000 (6875)
378.000 (6875)
386.000 (6875)

This table lists multiplexes that have errors in transmitted packets.

10. Watching channels

When you start the application (if there are channels in the receiver's memory), it will offer to start watching the channels on your smartphone (tablet).

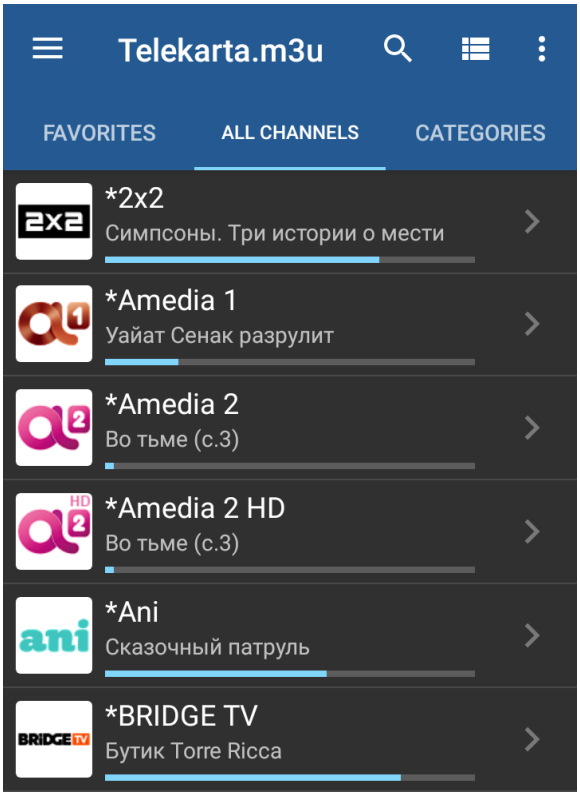


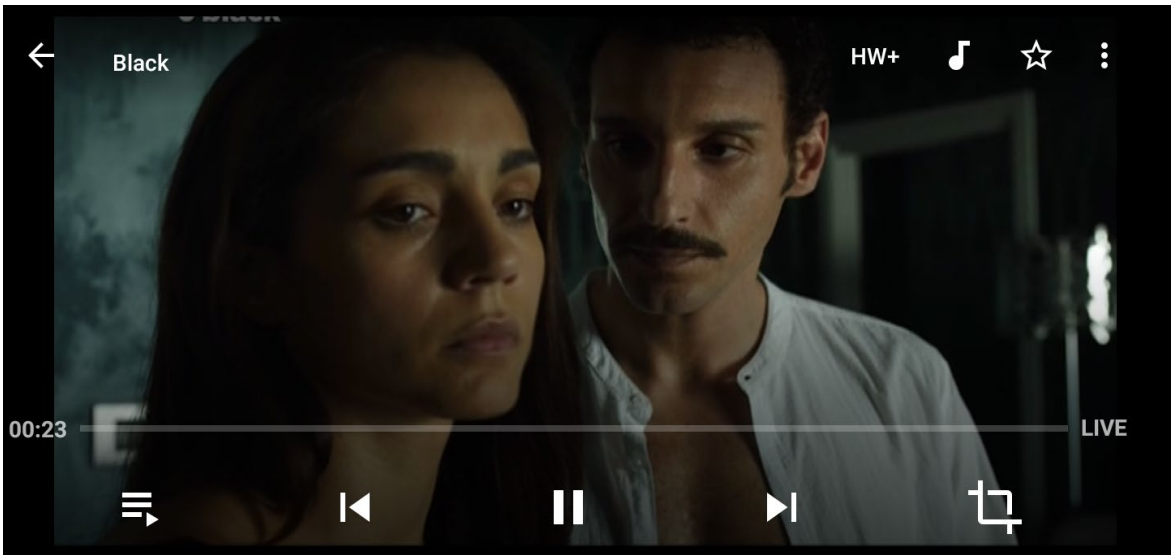
In the Playlists field, select the satellite TV, terrestrial TV, cable TV or operator you want to view. After that, the button Download Player is pressed to download and install the IPTV player.

If you do not have permission to install applications from unknown sources configured, then immediately after such a notification, you must execute permission to install the player.

You can also install the paid version IPTV Pro from the Google Play Store, which has no ads. The author of these players is Alexander Sofronov, support is provided on the forum https://4pda.to/forum/index.php?showtopic=314120.

After installing the player, the button in the application will change its name to Play and when it is pressed, the player with the selected playlist will be launched.



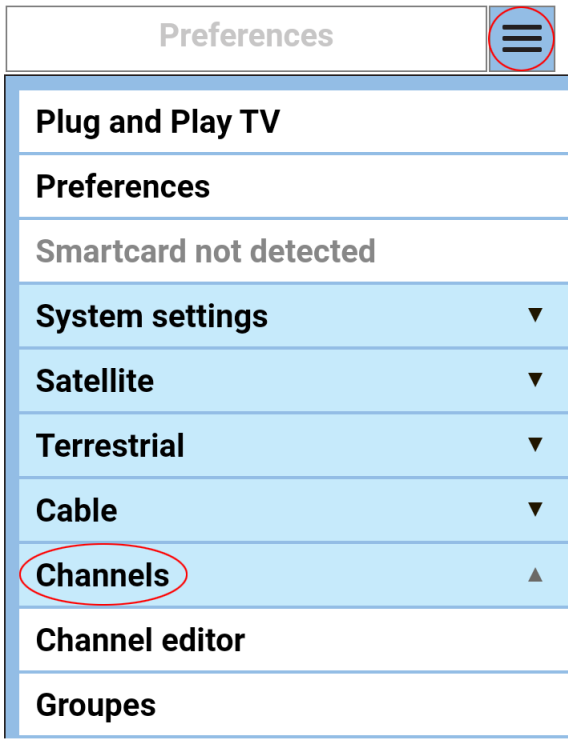


Attention! While watching channels via a smartphone, you cannot change channels on the TV, as this will cause viewing failure on the smartphone. In case you changed the channel on the TV and want to continue watching on the smartphone, then you need to switch the channel on the smartphone.

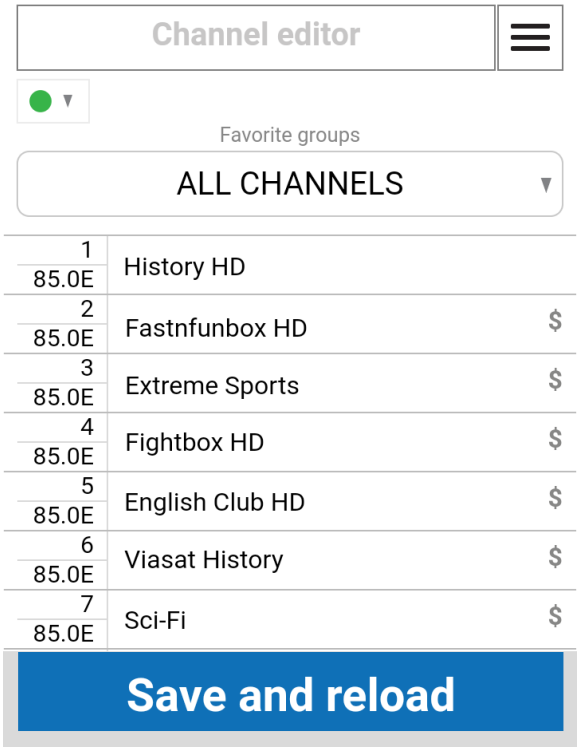
In order for the channels to be displayed in the playlist beautifully, you need to add channel icons for the satellites or operators used, as well as categories and an EPG for the channels. This is done through editing the application. This can be done by both the vendor and the average user with the appropriate skills. There is separate manual for editing the application.

11. Channels

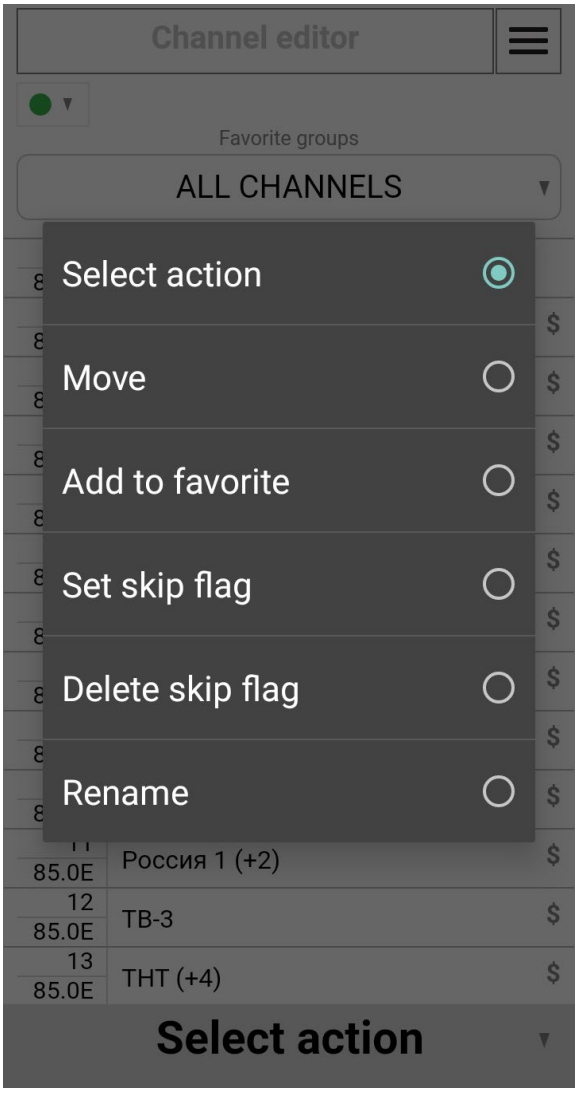
In this section of the application menu, you can edit channels, as well as sort the channels by genre.



11.1. Channel editor



This section is used to edit channels. To simplify access to the channel lists in the Favorite groups, you can select – all channels, satellite, terrestrial, cable, operator or genre, if these sections are available.



Editing channels is reduced to the selection of one or more channels by clicking on their names and then pressing the button – Select action.

Move – allows you to move channels to a specified location in the list;

Add to favorite – adds channels to the specified favorite group;

Set skip flag – marks channels that will be skipped in the playlist;

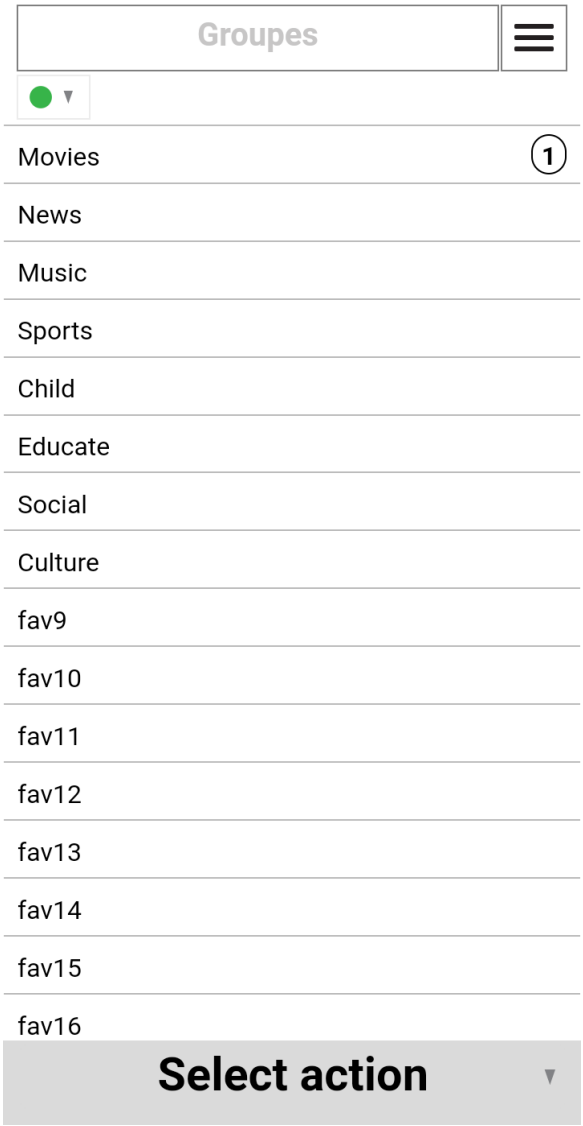
Delete skip flag – unchecks the channels that were skipped in the playlist;

Rename – allows you to rename the channel name.

After finishing editing the channels, you need to press the Save button. The receiver will reboot, and you will have a new channel list.

11.2. Groups by genre

This section of the menu is used to set up favorite groups at your discretion. Work with 16 groups is supported.



Select a channel group and press the Select action button. Then you can rename it to change the name of the group. Then the Save and reload button is clicked to save the changes.

12. Open Web API

To control the receiver through the application, a set of commands and responses is used – Open Web API. You can read the description of the Open Web API on the website https://ntt-technologies.com in the files section. This API allows any web programmer to modify or create their own applications and extensions to work with this device.