



Warranty

The manufacturer warrants that this product will meet the specifications in this document. The warranty period is 12 months from the date of purchase. During this period, the manufacturer provides free warranty service.

Warranty obligations do not apply to the following cases:

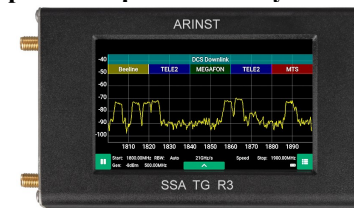
- the warranty period of the product has expired from the date of sale;
- there are no documents confirming the date and fact of purchase of the product;
- the product intended for personal needs was used for commercial activities, as well as for other purposes that do not correspond to its intended purpose;
- Violation of the rules and operating conditions set forth in the Operating Instructions and other documentation transferred to the Buyer complete with the product;
- if there are traces of unskilled repairs or attempts to open the Product outside an authorized service center, as well as due to unauthorized interference with the software;
- damages (shortcomings) of the Goods are caused by exposure to virus programs, software interference, or the use of third-party software (non-original);
- the defect is caused by force majeure (for example, earthquake, fire, lightning strike, instability in the electrical network), accidents, intentional or careless actions of the consumer or third parties;
- mechanical damage (cracks, chips, holes) that occurred after the transfer of the product to the Buyer;
- damage caused by exposure to moisture, high or low temperatures, corrosion, oxidation, ingress of foreign objects, substances, liquids, insects into the product;
- the defect arose due to the supply to the input connectors, terminals, signal housing or voltage or current exceeding the values allowed for this Product;
- the defect is caused by natural wear of the Goods (for example, but not limited to: natural wear of connectors due to frequent connection/disconnection of adapters).

Warranty obligations apply only to defects caused by the fault of the manufacturer. Warranty service is performed by the manufacturer or an authorized service center.

Date of sale _____ seller _____
(store name or stamp)

Familiar with the instructions and operating rules _____
(buyer's signature)

Arinst SSA-TG R3 portable spectrum analyzer with tracking generator



Manual. Passport products.

1. Purpose

Arinst SSA-TG R3 is a portable panoramic spectrum analyzer with a built-in tracking generator and demodulator designed to display the spectral components of signals in the frequency range from 24 MHz to 12 GHz. High scanning speed makes it possible to detect impulse signals of digital communication standards: Wi-Fi, 2G, 3G, 4G, LTE, CDMA, DCS, GSM, GPRS, GLONASS, etc. The built-in tracking generator allows you to measure the frequency response of passive or active devices, such as filters, amplifiers. Software demodulator of WFM/FM/AM signals is intended for listening to the air and tuning analog radio transmitters. Setting the regional coverage frequencies of cellular operators allows you to match the displayed signal with the corresponding operator. For convenience, the built-in software of the device allows you to sign and highlight frequency ranges on the screen. For example, sign the names of radio stations, Wi-Fi channels or frequency bands of mobile operators.

2. Device structure



Due to the constant improvement of the device and software, the manufacturer reserves the right to make changes to its technical characteristics and completeness.

3. Contents of delivery

Spectrum analyzer ARINST SSA-TG R3	1 pcs.
Adapter SMA(male)-SMA(female) to protect the connector from wear	2 pcs.
Cable USB2.0(male)-A – mini-USB	1 pcs.
Operation manual (product passport)	1 pcs.
Package	1 pcs.

When purchasing the analyzer, check its completeness. Attention! After purchase, claims for incompleteness are not accepted!

4. Specifications

Frequency range	
Displayed frequency range ¹	24 MHz-12 GHz
Measured frequency range	24 MHz-9 GHz
Maximum span	~12 GHz
Reference generator TXCO GPS	26 MHz
Frequency resolution	25, 10, 5, 2.5 kHz
Noise floor²	
in the band 24 MHz - 6.2 GHz	-110 dBm
in the band 6.2 GHz - 9 GHz	-100...-70 dBm
in the band 9 GHz - 12 GHz	-70 dBm
Scan options³	
Maximum scan speed	20 GHz/s
Minimum scanning time the full frequency band 12 GHz	0.6 s
RF input	
Gain when the attenuator is turned on	-15 dB
Gain with LNA on	+15 dB
Wave impedance	50 Ohm
SWR in the operating frequency range	< 2.0
Maximum input power without attenuator and LNA	0 dBm
Maximum input power with attenuator on	+15 dBm
Maximum input power with LNA enabled	-15 dBm
Maximum DC input voltage	25 V
Tracking generator	
Measurement modes	fix., S21
Normalized output power level in the band 24-6200 MHz	-8 dBm... -29 dBm
Normalized output power level in the band 6.2-9GHz	-14 dBm
Depth of power adjustment in the band 24-6200 MHz	21 dB
Demodulator	
Demodulation types	WFM, FM, AM
Audio output	Speaker 2 W, headphones
Display	
Screen type	touch resist., IPS
Screen resolution	800×480
Graphs	spectrum, Waterfall, S21
Power	
Built-in battery capacity	5000 mAh
Continuous battery life	~ 4 h
External power supply	7-24 V, 2 A.
Operating temperature range	0 ... +40°C
Dimensions (L×W×H)	145x81x27 mm
Weight	0,4 kg

1. In the display range, the accuracy of the parameters is not guaranteed.
2. The level of the noise floor is measured with the LNA turned on and the spectral resolution is 2.5 kHz.
3. Measurements are carried out in the "Speed" operating mode and a spectral resolution of 25 kHz.

5. Enabling the Analyzer

⚠ Do not switch the RF input jack while connected to a charger or USB connection to a PC. If these recommendations are not followed, the analyzer may fail.

Do not use the appliance outdoors during snowfall or rain. If the analyzer is brought in during the cold season from a cold room or from the street into a warm room, do not turn it on for a time sufficient for the condensate to evaporate. Match the signal strength and voltage supplied to the RF IN input connector with the maximum specifications shown in the table.

5.1. Make sure the analyzer has no external damage and the battery is charged. Charge the discharged battery. When the charger is connected, the maximum charging current is automatically determined. To reduce the battery charging time, it is recommended to use industrial power supplies (chargers) with a maximum output current of 3 A as a charger. When charging is completed, the **CHARGE** indicator will turn off.

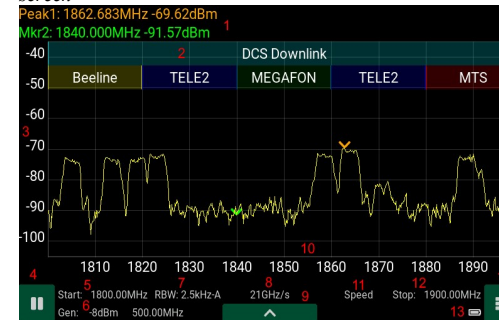
It is allowed to operate the device while the battery is charging, provided that the power supply is capable of providing an output current of at least 1500 mA. If the charger or USB port of the PC is not able to provide the current required to operate the device and charge the battery, the device will automatically reduce the current consumed until the battery stops charging completely. You can also use an external power supply.

5.2. Press and hold button (6) for 2 seconds. The analyzer will turn on. Set the required frequency range, connect a signal source to the input. User settings will be saved in the device memory and will be set automatically upon subsequent power-ups.

5.3. To turn off the device, press and hold the button (6) for 2 seconds. The instrument screen will turn off and the instrument will turn off. Each time the device is turned off, the main user settings are written to non-volatile memory, which allows you to avoid setting the device when you turn it on again.

6. Device screen

Information on the device screen



6.1. The results of scanning are displayed on the screen of the instrument in the form of a spectrum graph. The current settings and interactive buttons for controlling the instrument interface are located at the bottom of the screen.

6.2. The main components of the screen:

1. Field of markers - up to 4 pieces.
2. The field of frequency ranges.
3. Amplitude axis in dBm.
4. Pause button.
5. Start scan frequency in MHz.
6. Parameters of the built-in generator.
7. Frequency resolution.
8. Scanning speed.
9. Button for calling the additional menu.
10. Frequency axis in MHz.
11. Type of operating mode.
12. Stop scanning frequency.
13. Battery charge indicator.
14. The button to open the main menu.

6.3. Built-in battery status indicator:

- lightning indicator – the battery is charging;
- the indicator in the form of a battery is completely filled with white - the battery is fully charged;
- indicator in the form of a white outline of the battery - the battery is discharged, it needs to be charged;
- the device displayed a message about the critical charge level - the battery is completely discharged, the device will automatically turn off.