8. Warranty obligations

The manufacturer guarantees that this product meets the specifications specified in this document. The warranty period is 12 months from the date of purchase. During this period, the manufacturer provides a free warranty service.

The warranty does 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;
- violations of the rules and operating conditions set out in the Operating Instructions and other documentation provided to the Buyer 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;
- damage (deficiencies) of the Goods caused by the influence of virus programs, interference with the software, 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, deliberate or careless actions of the consumer or third parties;
- mechanical damage (cracks, chips, holes) arising 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 occurred due to the supply of a signal or voltage or current to the input connectors, terminals, housing that exceeds the permissible values for this Product;
- the defect is caused by natural wear of the Product (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 _____

(date, month, year) (store name or stamp)

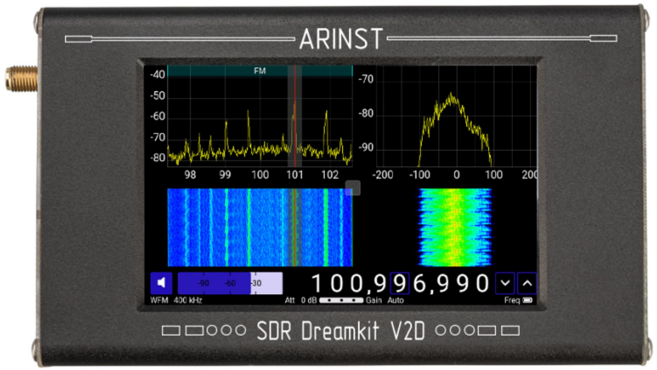
I have read the instructions and operating rules _____

(Buyer's signature)

2443

LLC "Kroks Plus"
394005, Voronezh, Moskovsky pr. 133-263
+7 (473) 290-00-99
info@kroks.ru
https://kroksw.com/

Portable radio receiver ARINST SDR Dreamkit V2D with autonomous power supply



Operation manual (product passport)

1. Purpose

1.1. The ARINST SDR Dreamkit V2D portable radio receiver (hereinafter receiver, device) is designed for receiving, displaying and listening to radio signals with various types of analog modulation. Up to 4 spectrum/waterfall graphs for different bands can be displayed on the display. The receiver is built using SDR technology, which allows to programmatically control the settings of the device. The signal processing and demodulation unit is completely made on a DSP-based microcontroller. The device can be used both offline and under PC control. The demodulated signal can be listened to via the built-in speaker or wired headphones.

1.2. The receiver is designed for listening to amateur radio communications on the MW / HF / VHF / UHF bands, tuning analog modulation transmitters, radio monitoring, as well as searching for radio bugs. The aluminum case and the presence of a built-in battery allows it to be used both in laboratory and practical conditions.

2. Device structure

1. Input connector (RF IN)
2. The button for turning the device on/off and calling the main menu
3. Indicator STATUS
4. Headphone jack
5. Color resistive screen 4”
6. Battery charging indicator
7. Connector USB type C
8. Multifunctional valcoder

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. Delivery set

Name	quantity
Portable radio receiver **ARINST SDR Dreamkit V2D**	1
Adapter SMA(male)-SMA(female) to protect the connector from wear	1
Cable USB2.0(male)-A – USB type C	1
Operation manual (product passport)	1
Package	1

When purchasing a radio receiver, check its completeness.
Attention! After the purchase of the receiver, claims for incompleteness are not accepted!

4. Specifications

Parameter		value
Working frequency range		100 KHz - 2800 MHz
Sampling frequency		12 MHz
Maximum width of the viewing band		5 MHz
Minimum frequency resolution		1 Hz
ADC bit rate		16 bit
Sensitivity, no less		0,25 uV
Control range of low noise amplifier		0-30 dB
Control range of attenuator		0-30 dB
Input impedance		50 Ohm, HI-Z
Reference generator TCXO		26 MHz ±0.5 ppm
Types of modulation		CW, AM, LSB, USB, DSB, NFM, WFM/STEREO/RDS
Fixed filter bands for WFM		100, 200, 300, 400 kHz
Adjustable filter band for WFM		50 - 450 kHz
Fixed filter bands for AM, NFM		4, 6, 8, 10, 20 KHz
Adjustable filter band for AM, NFM		2 – 25 kHz
Fixed filter bands for LSB, USB, DSB		1.8, 2.0, 2.4, 2.7, 3.3 KHz
Adjustable filter band for LSB, USB, DSB		1 – 5 kHz
Fixed filter bands for CW		0.25, 0.3, 0.5, 1, 1.5 KHz
Adjustable filter band for CW		0.1 – 2 kHz
Maximum input signal power applied to the port with LNA and attenuator off		-15 dBm
Maximum input signal power applied to the port with LNA off and 30 dB attenuator on		+15 dBm
Maximum input signal power supplied to the port at 30 dB attenuator on		+20 dBm
Displayed graphs	■Baseband; ■IF1; ■IF2 (MPX); ■Waterfall; ■Audio; ■ RDS; ■ S-meter	
Additional options	AGC, Noise reduction, Noise blanker, Notch filters, Equalizer	
The number of memorized user settings		40
Audio out		Built-in speaker, headphones
Maximum power of the built-in speaker		2 W
Screen diagonal		4”
Screen type		touch resistive
Screen resolution		800×480
Maximum consumed current, no more	when charging the battery	≤ 2 A[1]
	when operating from USB with battery charging [2]	≤ 2 A
Battery capacity		5000 mAh
Battery continuous operation time [3]		~ 4 h
Battery charging time		~ 3,5 h
PC connection interface		USB 2.0 HS Type C
Operating temperature range		0 … +40°C
Overall dimensions (L×W×H)		150x81x27 mm
Weight		0,4 kg

[1] When connecting the device to a charger with an output current of at least 3A.

5. Turning on the receiver

⚠ **Do not connect the RF input jack while the charger is connected or USB connected to a PC. If these recommendations are not followed, the radio receiver may fail.**

⚠ **The use of the receiver in the open air during snowfall or rain is prohibited. If the receiver is brought in during the cold season from a cold room or from the street to a warm room, do not turn it on for a sufficient time for the condensate to evaporate from the receiver.**

5.1. Make sure that the radio receiver 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 complete, the **CHARGE** indicator will turn off.

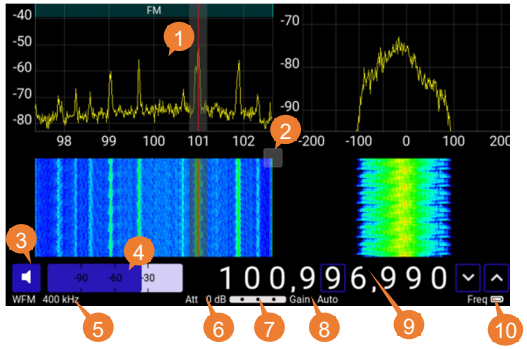
It is allowed to operate the device while charging the battery, provided that the power source is capable of providing an output current of at least 1500 mA. If the charger or the USB port of the PC is not able to provide the current required for the operation of the device and charging the battery, the device will automatically lower the current consumption until the battery is completely stopped charging.

5.2. Press and hold button (2) for 2 seconds. The receiver turns on. Tune the receiver to the frequency of interest, select the required type of demodulator, adjust the required graphs. User settings will be saved in the device's memory and will be automatically installed on subsequent power-ups.

⚠ **During operation, the receiver display may generate pulse interference at some frequencies. To listen to the broadcast without interference, it is recommended to turn off the display by double pressing the multifunctional button (2).**

5.3. To turn off the device, press and hold the button (2) for 2 seconds. The device screen will go off, the device will turn off. Each time the device is turned off, the main user settings are recorded in non-volatile memory, which allows you to avoid configuring the device at the next turn-on.

6. Device screen



6.1. The instrument displays graphs of the spectrum / waterfall of the bands of interest. 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) - graphs area;

(2) - the button for controlling the display of graphs. When moving with pressing and holding, the ratio of the sizes of the graphs on the screen changes. Pressing and holding without moving opens a menu for selecting the types of graphs and diagrams to display;

(3) - volume control button for audio devices;

(4) - S- meter;

(5) - information about the type of the current demodulator and demodulation bandwidth;

(6) - attenuator value

(7) - instrument menu pull area;

(8) - value or mode of operation of the low-noise amplifier;

(9) - tuning frequency selector with discrete tuning buttons for selected digits;

(10) - built-in battery status indicator.

6.3. Built-in battery status indicator:

- lightning indicator - the battery is charging;
- the battery indicator is completely filled with white color – the battery is fully charged;
- indicator in the form of a white contour of the battery – the battery is low, it is necessary to charge it;
- the device displays a message about a critical charge level – the battery is completely discharged, the device will automatically turn off.

The red vertical line on the graphs indicates the current frequency of the receiver setting. The gray background around the setting pointer reflects the selected demodulation band. Background width is proportional demodulator band.

7. Working with HD SDR

The radio receiver provides the ability to connect to a PC using the USB cable included in the delivery package. Built-in software allows you to connect the radio to a popular HD SDR software. Implemented the ability to manage the receiver settings and transmit on the PC data stream from the ADC.

The complete operating manual of the device in PDF format is available on the website https://kroksw.com/