

Acoustic Noise Generator

LGS - 304



Operation Manual

St. Petersburg

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1. Introduction

1.1 The owner's manual contains information needed for proper operation of the LGS-304 (hereinafter referred to as LGS-304, the Product) acoustic noise generator and comprehensive application of its technical capabilities.

2. Scope of Application

2.1 LGS-304 is designed to protect acoustic voice data being processed in the given premises up to the first safety level against leakage via direct acoustic, vibro-acoustic and optico-acoustic channels by means of jamming in frequency range 90-11200 Hz.

2.2 The LGS-304 is applied in premises in continuous mode at ambient temperature from + 1 to + 40 ° C, relative humidity up to 80% at + 25 ° C.

2.3 It is recommended that the device is installed and configured by the companies with the corresponding FSTEC licenses.

2.4 When certifying certain premises to check whether they meet the requirements of protecting speech information of restricted access against unauthorized interception, in case the method of spatial acoustic jamming is applied using this Product, it is required to conduct special research to determine its efficiency and register the protocol of special studies.

3. Main Technical Data

3.1 The parameters of the Product correspond to the requirements specified in Table 1.

Table 1

No	Parameter	Parameter Value
1.	Input voltage of secondary power source	220 V, 50 Hz
2.	Voltage of the main unit:	24 V
3.	Frequency range of output acoustic signal, Hz	90 - 11200
4.	Adjustment range of output signal voltage, dB, up to	10
5.	Adjustment range of octave level in the band with average frequency of 1000 Hz, dB, at least	10
6.	Noise quality coefficient, at least	According to the requirements of Document 1 for Category 1 premises
7.	Coefficient of interspectral correlation of noise interference, up to	According to the requirements of Document 1 for Category 1 premises
8.	Power consumption, W, up to	10
9.	Dimensions (without power supply unit), mm, up to	140×70×70
10.	Dimensions of power supply unit, mm, up to	80×60×70
11.	Weight of generator unit, kg, up to	1,5
12.	Weight of power supply unit, kg, up to	0,4
13.	Ambient temperature	from + 1 to + 40 °C
14.	Relative humidity, up to	80 % at +25 °C
15.	Atmospheric pressure	630–800 mmHg
16.	Mean time between failures, at least	10000 hours
17.	Average operating lifetime	10 years

Note: Document 1 - "Means of active protection of electronic computer facilities against information leakage according to side electromagnetic radiation and pickup. Main technical requirements". Minradioprom, 1987.

4. In Box

The Product's In Box is specified in Table 2

Table 2

No	Name	Pcs
1.	LGS-304 - main unit	1
2.	Bracket	1
3.	Mounting screws of the bracket	2
4.	Mounting screws	2
5.	Gasket	2
6.	Power supply with output voltage 24 V	1
7.	Operation Manual	1
8.	Passport	1
9.	Mark of conformity	1
10.	Copy of FSTEK Certificate	1

5. Operation Principle

5.1 LGS-304 Operation Principle

5.1.1 The device is powered from network of 220V, 50 Hz via secondary regulated power supply. 5.1.2 The operation principle of the Product is based on generating white noise in the acoustic frequency band.

5.1.3 This model can protect a room with the volume of up to 50 m³. If you work in a bigger room, you need to use several LGS-304 generators.

5.1.4 It is recommended to install generators in close proximity to the possible interception places. In practice, generators are installed in door and window openings, as well as in air ducts and near utility lines.

6. Safety Measures

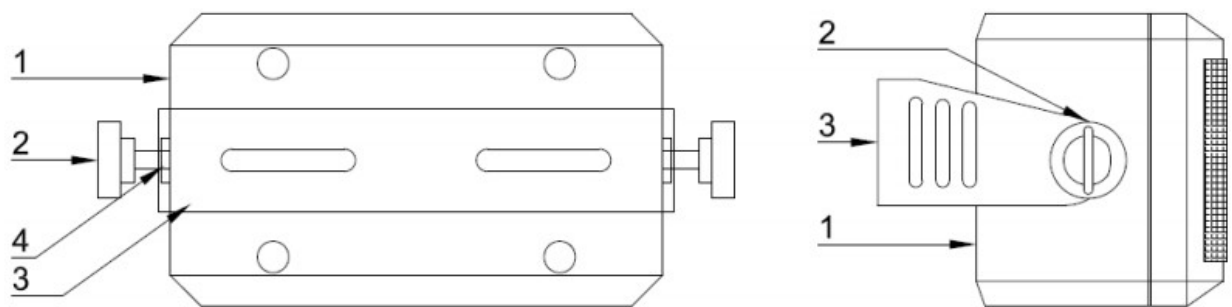
6.1 The product is used in accordance with the regulations of technical maintenance of electrical installation and safety regulations.

7. Installation and Operation Procedures

7.1 After storing the Product in a cold room or transporting in winter conditions, it can be plugged in not earlier than after 4 hours stay at room temperature.

7.2 Before installing make an external examination of the Product to make sure there is no mechanical damage and check it for completeness.

7.3 Join the bracket with the main block using mounting screws and gaskets (all of these are in the Delivery set).



1 - Generator block, 2 - Mounting screws, 3 – Bracket, 4 – Gasket

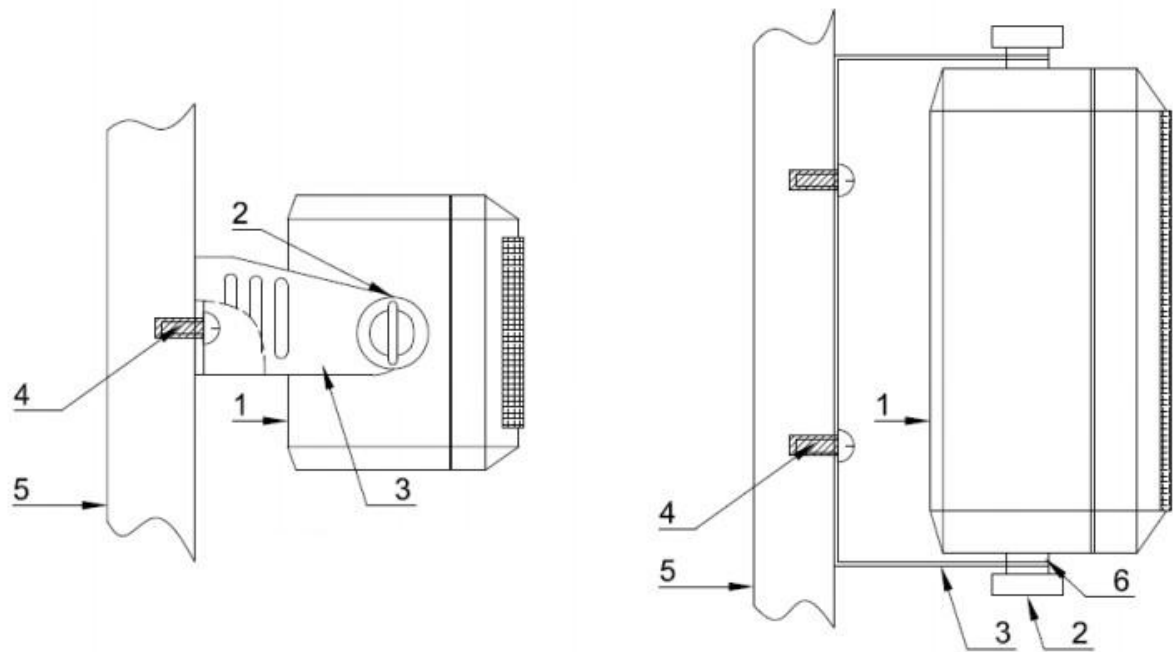
Figure 1 - Product Assembly

7.4 The product is fixed in a vertical or horizontal position using the holes in the bracket, which is connected to the Product's body. The installation site must provide natural air circulation around the Product.

7.5 It is recommended not to place the Product near heating appliances and other sources of increased heat dissipation.

7.6 Before installing the generator, determine the possible places of voice data interception via direct acoustic, vibro-acoustic and optico-acoustic channels. These may be window and door frames, walls, ceilings and floors of buildings, vents and ducts, pipes of central heating and water systems, glass and thin walls.

7.7 To fix the Product on a wall or any other flat surface, unlink the bracket from the generator's block. Use the supplied Jack-Point screws to attach the bracket to wall where the Product is to be installed. Link the bracket and the main block (see Figure 1)



1 - Generator block, 2 -Mounting screws, 3 – Bracket, 4 - Jack-point screw, 5 – Wall, 6 – Gasket

Figure 2 - Wall Mounting

7.8 Preparation for work is as follows:

7.8.1 Connect secondary regulated power supply to the main unit of the Product observing polarity (color coded output +24V-not marked output- body).

7.8.2 Plug power supply unit into the nearest power outlet 220V, 50Hz.

7.8.3 Using a screwdriver, adjust the desired volume level of acoustic noise by turning the potentiometer at the bottom of the main unit of the Product.

7.8.4 Using a screwdriver, adjust the desired correction level of acoustic noise by turning the potentiometer at the bottom of the main unit of the Product

7.9 The product is ready to start operating. If you need to protect speech information, it is sufficient to plug in secondary power source in 220V, 50Hz network.

7.10 To power off the Device, power off power supply unit or connect it off power supply 220 V, 50 Hz

8. Maintenance

8.1 The Product is maintenance free. Maintenance procedures are carried out at least once a year involving:

- Checking the integrity of the case; Items, cable connectors fixing, power wires reliability;
- Dust and dirt cleaning.

8.2 Maintenance procedures are carried out without current.

9. Storage and Transportation

9.1 Conditions of storage: 1 (A) in accordance with GOST 15150-69.

9.2 The Product must be stored packed in heated and ventilated warehouses, protected from the atmospheric influences, in the absence of aggressive gases and vapors, causing destruction of the equipment under the following conditions:

- temperature from + 1 to + 40 ° C;
- relative humidity: from 30% to 80%;
- atmospheric pressure (795 ± 50) mmHg

9.3 The product can be transported by any mode of transport at any distances provided that individual packaging is protected against damage and precipitation in the form of rain, snow and fog at ambient temperatures from - 40 ° C to 50 ° C.