

Testing Laboratory
“Science-research center SAMTES”

Accreditation certificate № ГСЭН.RU.ЦОА.207 from 7. September 2000.

115114 Moscow
2nd Kozevniceskiy pereulok
buil. 4/6 ЗАО НИЦ „САМТЭС“
phone: (095) 235-99-55

I DETERMINE
Senior engineer
ЗАО НИЦ „САМТЭС“

K.G. Bociev
Aprile 2002.

PROTOCOL № 02-1-ИС/02

The measurements of electrostatic potential of video monitor with the application of protection device "Neitronik".

1. TESTED PRODUCT:

- 1.1. Video monitor SAMSUNG type CVP4237PL, series № H21F300717.
- 1.2. Video monitor HEWLETT PACKARD, series № KP43840444.
- 1.3. Video monitor NEC type JC-1531VMB-2, series № 3909988TB (control sample).
- 1.4. Radiation neutralizer “NEITRONIK” type MG-04 № 97, 596.

2. DATE AND PLACE OF TESTING

March – April 2002.
Science-research center SAMTES

3. STANDARDS AND METHODS OF TESTING

Standards - ГОСТ Р 50948-96, СанПиН 2.2.2.542-96.
Methods of testing – ГОСТ Р 50949-96

4. CONDITIONS OF PERFORMING TESTING

Temperature 18 - 19 °C, atmospheric pressure 738-755 mm mercury pillar, relative humidity 47-51%, voltage 220V, frequency 50Hz.

5. TESTING EQUIPMENT AND INSTRUMENTS:

- 5.1. Stand for measuring of electrostatic potential. Certificate № 106 from 05.03.2003.

6. THE MEASUREMENT RESULTS:

Several series of measurements were performed for each type of testing in accordance with the standard ГОСТ Р 50948-96 (each series consisted of 10 measurements). For monitors SAMSUNG type CVP4237PL, series № H21F300717 and HEWLETT PACKARD, series №

KP43840444 values of the radiation parameters were first measured without radiation neutralizer „NEITRONIK“ (1 series), and after with radiation neutralizer „NEITRONIK“ (3 series).

Radiation neutralizer “NEITRONIK” type MG-04 № 97, is stuck to the monitor SAMSUNG, № 596 and on monitor HEWLETT PACKARD (HP).

For NEC type JC-1531VMB-2, series № 3909988TB 3 series of measurements were performed at different times without radiation neutralizer „NEITRONIK“. The total number of the realized measurements was 110.

Background values in the laboratory during all the measurements were within limits of values listed in Table 1.

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The results of electrostatic potential measurements of monitor are presented in Table 2.

7. CONCLUSION

Measurement results indicate significant reduction of electrostatic potential of monitor screen during usage of “NEITRONIK” compared to the control sample:

- monitor SAMUSNG - reduction was 2.9 times;
- monitor HP - reduction was 4 times;
- control monitor NEC - reduction was 1.5 times;

Head of laboratory

A.A. Elistratov

Measurement were performed by:

V.V. Barabanov

REMARK:

1. The protocol refers only to monitor samples subjected to testing.
2. Prohibits full or partial protocol copying without approval of this laboratory.

Table №1.

Background values of turned off monitor

Electrostatic potential of screen, V
2 – 5

Table №2.

Measurement results of electrostatic potential of videomonitors screen

Measured values U, V without "Neitronik"						Measured values U, V with "Neitronik"					
	NEC	NEC	NEC	Samsung	HP	Samsung	Samsung	Samsung	HP	HP	HP
	25.03.02 19 ⁴⁰	26.03.02 9 ⁰⁰	2.04.02 11 ¹⁰	25.03.02 16 ⁴⁰	25.03.02 13 ¹⁰	25.03.02 17 ²⁵	2.04.02 11 ¹⁰	2.04.02 14 ³⁰	2.04.02 14 ⁵⁰	2.04.02 16 ²⁰	2.04.02 17 ³⁰
1	45	41	32	75	108	63	35	28	62	48	26
2	47	40	30	78	106	64	33	26	60	48	27
3	44	40	28	76	103	65	36	25	60	50	27
4	42	42	29	75	105	65	34	27	58	49	26
5	46	43	31	77	105	64	36	27	58	50	25
6	47	43	30	75	104	63	35	25	60	49	25
7	45	42	29	74	106	65	35	26	61	48	25
8	46	40	30	73	104	66	36	26	60	48	25
9	45	39	30	72	105	65	35	25	61	48	26
10	45	40	29	74	105	64	35	25	60	48	25
Mean	45	41	30	75	105	64	35	26	60	49	26
Measur. Quantity	50					60					

Measurement were performed by:
Barabanov

_____ V.V.

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I DETERMINE
Senior engineer
ЗАО НИЦ „САМТЭС“

K.G. Bociev
4. Aprile 2002.

PROTOCOL № 04-ИС/02

The testing of radiation neutralizer "Neitronik" type MG-03 on the effect of external electromagnetic field generated by mobile phone (MP) of GSM standards.

1. TESTED PRODUCT:

1.1. Radiation neutralizer “NEITRONIK” type MG-03, lot № 97, series № 1311.

2. GOAL OF THE TESTING

Determining the effect of radiation neutralizer "Neitronik" type MG-03 on the effect of electromagnetic field generated by mobile phone of GSM standards.

3. DATE AND PLACE OF TESTING

April 2002.
Science-research center SAMTES

4. STANDARDS AND METHODS OF TESTING

Methods of testing – СанПин 2.2.4/2.1.8.055-96.

5. CONDITIONS OF PERFORMING TESTING

Temperature 21 °C, atmospheric pressure 742 mm mercury pillar, relative humidity 51%, voltage 220V, frequency 50Hz.

6. TESTING EQUIPMENT AND INSTRUMENTS:

- 6.1. Spectrum analyzer HP 8591EM № 3801AO1449094. Certificate № 21/224 from 13.06.2002.
- 6.2. Logoperiodic antenna HP 11956A-93146 № 9812-5154. Certificate № 21/224 from 13.06.2002.

- 6.3. Mobile phone GSM standard SIEMENS SL45, serial № 350016516618198 (№ 1).
- 6.4. Mobile phone GSM standard SIEMENS SL45, serial № 350016516618199 (№ 2), control samples.

7. TESTING RESULTS:

A GSM standard mobile phone, SIEMENS SL45, was used as a source of external electromagnetic field.

The examination was conducted in the following way:

First measurements of electromagnetic field (EMF) of the mobile phone №1 (MP) were taken without "NEITRONIK", and then with "NEITRONIK" applied (series 1).

After 1 hour and 20 minutes, measurements were retaken with and without "NEITRONIK" (series 2).

Furthermore, EMF was measured from the MP №2 without "NEITRONIK" - 2 times with 30 minutes delay in between.

Spectrum analyzer HP 8591EM with logoperiodic antenna HP 11956A-93146 with 5 minutes accumulation time was used as a measurement instrument.

Distance between receiving and transmitting antennas - 3 meters.

Measurement results for MP №1 are shown in table 1.

Measurement results for MP №2 are shown in table 2.

8. CONCLUSION

Research results confirm that radiation neutralizer "Neitronik", model MG-03, reduces electromagnetic field voltage of GSM standard phones, to position of measurement instrument receiving antenna.

Head of laboratory

A.A. Elistratov

Measurement were performed:

V.V. Barabanov

REMARK:

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Table №1.

**Measurement results of input voltage of the spectrum analyzer,
vertical polarization**

Input voltage of the spectrum analyzer U, mV					
F, MHz	Series 1		Series 2		
891.5	Without „N“	With „N“	With „N“	Without „N“	With „N“
Time	14 ⁰⁷	14 ¹⁶	15 ⁴²	15 ⁵¹	15 ⁵⁸
	121	76	74	99	76

Table №2.

**Measurement results of input voltage of the spectrum analyzer,
vertical polarization**

Input voltage of the spectrum analyzer U, mV				
F, MHz	Series 1		Series 2	
891.5	Without „N“		Without „N“	
Time	16 ³⁸	16 ⁴¹	17 ⁰⁴	17 ⁰⁶
	81	83	84	76

Measurement were performed: _____ V.V. Barabanov