

CEM® CORPORATION



**CEM®-TECH
APPARATUS
OWNER'S MANUAL**

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Attention! The apparatus is a complex piece of medical equipment. It may only be used after the manufacturer's documentation has been studied and in strict observance of operating rules, security measures, and also in observance of clinical use rules that are stated in this Owner's manual. Close attention should be paid to contraindications during use of the apparatus.

ANNOTATION



This manual is designed for beginners as well as for specialists: reflexotherapists and physiotherapists, doctors of regenerative medicine, therapists and specialists in non-traditional medicine. Domestic use of the apparatus by patients does not obviate the need for constant monitoring and supervision over their condition by attending physicians.

The apparatus has passed clinical testing with numerous functional and laboratory tests that have objectively recorded positive dynamics of treatment of many diseases. For specialists, the main theoretical aspects of the action of BRR and EHF-radiation therapy are described in brief. Also, there is a list of recommended literature for closer study of EHF-therapy.

FOR DISEASES THAT SERIOUSLY THREATEN LIFE AND HEALTH, THE DEVICE CAN ONLY BE USED UNDER A DOCTOR'S SUPERVISION AND ONLY AS A PART OF COMPLEX THERAPY.



1 INTRODUCTION



Modern methods of treatment in many cases involve the use of toxic pharmaceutical products. The use of EHF-therapy in complex treatment helps to increase treatment effectiveness in many cases, as well as to decrease toxic load on the body. In some diseases, such as those concerned with the disturbance of blood microcirculation, the use of EHF-therapy helps to execute treatment in monotherapy mode.

EHF-therapy belongs to the class of non-invasive physiotherapy methods that influence the body in a “soft” and harmless manner, and increase its non-specific resistance. In some cases they can be used in domestic conditions.

Hereinafter, under **EHF-therapy**, the following mode is implied: background noise radiation, the spectral power density of which to include all individual frequencies in the spectrum that influence the body. Accordingly, in all cases, fixed frequencies were constituents of the noise spectrum as a whole and, henceforth, for other frequency values, the aforesaid should be understood. The CEM®-TECH apparatus implements this EHF-therapy mode.

The CEM®-TECH apparatus also utilizes background resonance radiation (BRR), based on the application of materials that have a memory effect and which are able to form a spectral analogue of the irradiation of cells of living organisms in the EHF spectrum and to perform its re-radiation in autonomous mode (Gunn diode). Thanks to the influence of cell structures on the resonance frequency, there is a weakening or a total suppression of pathological and an intensification of physiological oscillations, with the restoration of dynamic balance in the patient's organism.

Extra high frequencies (EHF) occupy the spectrum of 30—300 GHz (wavelength spectrum is 10~1 mm). In the EHF-spectrum, the reaction of bio-objects is caused by frequency resonances, and high therapeutic effectiveness is recorded under weak radiation, the power of which is considerably less than in other spectra. This is explained by a lack of adaptation to this kind of cosmic radiation, because it is held down in atmosphere, and also by resemblance of active signal against own electromagnetic waves, emitted by the body.

For EHF-therapy, radiation in the 32—78 GHz spectrum of is used the most actively.

Some of the advantages of EHF-therapy include: painlessness (which is especially important for children and hypersensitive patients), the absence of side effects, and the exclusion of accidental contamination of patients and medial staff.

The depth of penetration of EHF-radiation upon impact on the human skin surface is 300—500 μm , i.e. it is almost completely absorbed by the epidermis and top layers of the derma. The zone of its direct action covers nervous system receptors (mechanoreceptors, nociceptors and free nerve endings), the capillary channel of the blood system; skin leukocyte depot; cells of the diffuse neuroendocrine system, in particular mast cells. Therefore, the objects of therapeutic action of EHF-therapy are:

- nervous system;
- immune system and phagocytes;
- system for regulation of the blood's aggregative state (coagulative and anticoagulative mechanisms);
- humoral control system.

As a result, the effectiveness of EHF-therapy is shown in a very broad spectrum of diseases.

CEM[®]-therapy (abbreviation of Controlled Energy Material Technology) is a new, state-of-the-art method of EHF-therapy, which is based on technology for using materials with a controlled energy structure. They were created according to special technology on the basis of gallium arsenide, and capable of “remembering” external EHF-radiation, thus forming an exact similarity of signals of the pathogenic and/or medical factor. This enables an influence to be exerted on the organism not only in the classical mode of EHF-therapy, but also in the mode of background resonant radiation (BRR). These are the modes executed by the CEM[®]-TECH apparatus.

Clinical approbation has shown that EHF and BRR are especially effective in cases of medication intolerance, presence of contraindications to methods of traditional physiotherapy and reflexotherapy, as well as when these forms of treatment prove insufficiently efficient.

By analyzing data from sources of literature, we can list the following mechanisms of EHF-therapy action on the body:

- Normalization of immune system functioning (increased number of T- and decreased number of B-lymphocytes and immunoglobulins (Ig) A and M (Bakaliuk et al., 1998), increased number of T-lymphocytes in comparison with baseline (Kuz'menko, 1998), the concentration of circulating immune complexes, B-lymphocytes and immunoglobulin G decreased and the number of T-lymphocytes and IgA increased (Shliapak et al., 1996), the decrease of CD8+ positive T-lymphocytes (Jin Z, Lin M, Xia J, Zhuang J, Yang R, Li X, et al., 2001), normalization of prior existing disimmunoglobulinaemia and normalization of functional activity of neutrophils (Briskin B. C. and et al, 2003), rehabilitation of functional activity of B-lymphocytes and phagocytic activity of neutrophils (Bukatko B. N., 2003).

- Increase of nonspecific body resistance (E. E. Tumanyac, N. A. Termuryanc, 1997).
- Normalization of lipidic metabolism indicators (increased concentration of high-density lipoproteins, decrease of triglycerides (Kuz'menko, 1998)).
- Normalization of the bioelectric brain activity (stabilization of α -rhythm) and disappearance of the pathologically slow δ -waves monitored by means of electroencephalography (Tyshkevich et al., 1998), increase in spectral facility of electroencephalogram α -rhyme (M. Y. Gubarec, 1989), and rehabilitation of initially disturbed interzonal and interhemispheric interrelations of basic electroencephalogram rhymes (A. E. Stolbikov and et al, 1991).
- Activation of hemopoiesis in red bone marrow (N. N. Lebedeva, T. I. Kotrovskaya, 2002).

- Normalization of rheological blood properties (lowering of blood viscosity, increase of erythrocytes deformation (S. S. Parshina and et al, 2003)).
- Normalization of coagulant and anticoagulative factors balance (normalization of antithrombin III level (N. A. Lopatina and et al, 2003), normalization of fibrinolytic activity and thrombocyte hemostasis (V. N. Bukatko, 2003)).
- Normalization of vessel tone and microcirculation activation (normalization of endothelium vessel reactivity (S. S. Parshina and et al, 2003), normalization of rheogram indicators (G. B. Dikke, 1999; T. N. Afanaseva, V. D. Petrova, 1995) and rheoencephalogramm indicators (A. A. Tcarev, M. A. Kudinova, 1997)).
- Normalization of vegetative regulation, stabilization of sym-

pathetic and parasympathetic parts ratio of vegetative nervous system (G. B. Dikke, 1999).

- Normalization of pro- and anti-oxidant systems ratio (E. E. Tumanyc, N. A. Temuryanc, 1997).
- Activation of cell regeneration (increase in proliferation of fibroblasts (A. G. Polyakova et al., 1999)).
- Normalization of kateholomin and sexual hormones secretion (A. A. Tcarev, M. A. Kudinova, 1997; V. N. Zaporozhan et al., 1997).
- Influence on endogenous opioid system (Radzievsky et al., 2001), activation of antinociceptive system (B. N. Kirova, 2000).
- Antistress action — suppression of excessive activity of symphato-adrenal system and activation of stress-limiting systems (E. N. Chuyan, N. A. Temuryanc, 2005).

- Suppression of influenza virus reproduction inside the cells and viricidal effect (R. Y. Podcherny-aeva et al., 2004).
- Rehabilitation of mononuclear ability to secrete γ -interferon, which enables the decrease in possibility of cancer development for risk group patients (S. P. Sitko et al., 1993).
- Cytoprotective action towards red marrow cells and liver during polychemotherapy (N. P. Karaeva et al., 2006).
- Change in structure-dynamic characteristics of cell membranes (I. G. Semina et al., 2007).
- Anti-inflammatory effect, based on stimulation of mast cell degranulation and measurement of phagocytes' functional activity in the centre of inflammation (A. B. Gapeev, N. K. Chemeris, 2007).
- Inhibition of skin, liver, and brain aging processes (I. V. Rodshtat, 2007).

The use of EHF-therapy in BRR mode normalizes psychoemotional and regulatory processes in the organism and it optimizes the rehabilitation of patients with acute and chronic diseases of various organs and organ systems, both at establishments for medicinal and prophylactic treatment, and at home.

The normalizing effect from use of these modes of the CEM®-TECH apparatus has made it possible in this owner's manual to turn away from the usual description of medical techniques as "specific therapy technique for a specific illness", using the principle of initial restoration of regulatory processes with subsequent use of therapy techniques for the illness of an organ or organ system.

Corresponding influence modes are specified additionally in parts 4, 5 and 6 of this Manual. The presented list does not limit indications for use of the apparatus, but each particular case should be preceded by consultation by an attending physician to determine the final diagnosis and exclude individual contraindications. The initial course of treatment demands obligatory control and/or specialist participation.

2 INDICATIONS OF AND CONTRAINDICATIONS TO APPLICATION OF THE METHOD



2.1. Indications of the use of EHF and BRR-therapy

Because the realization of the medical effect of EHF and BRR-therapy with low frequency modulation involves the use of common biological and adaptive mechanisms, this method is effective for treatment of many illnesses as a part of complex therapy. BRR and EHF-therapy combine well with other forms of treatment (surgical and drug-based treatment, physiotherapy and homeopathy). In some cases, it is possible to use EHF and BRR therapy as monotherapy: as prophylactics and treatment of the early stages of acute respiratory disease, pain syndrome therapy for pathology in the joints in the event of a moderate condition and without expressed anatomical changes, etc.

The list of nosologic forms and syndromes that are positively affected by EHF and BRR-therapy is continuously growing. The modes for different diseases, offered by the apparatus,

present the combined clinical expertise from different groups of researchers. Some of the most effective modes are recommended for use by doctors, including use in state clinics. The list of the BRR and EHF-therapy methods, implemented using the CEM®-TECH apparatus, approved or pending approval at the Russian Federal Agency Rosmedtekhnologiya can be viewed on the producer's website at: http://www.stella.tomsk.ru/med_tech.htm.

From analyzing publications on clinical tests of the CEM®-TECH apparatus, we can conclude that **the influence of EHF-radiation and BRR on the body helps to:**

- reduce pain syndrome of any genesis and inflammatory effects in pathologic centres;
- shorten the period of in-patient treatment for a broad list of diseases;
- broaden possibilities of rehabilitation treatment in ambulatory and home conditions;
- execute initial and secondary prophylactics;

- increase the effectiveness of medicinal drug use and, at the same time, reduce the dosage of prescribed medications and, in some cases, to even do away with them altogether.

All researchers certify good tolerance of EHF-influence and a lack of complications and side effects, including in patients that were observed after treatment over long periods of time (1—2 years). Patients had no or slight pain sensations in the place of influence (some patients had a sensation of “light pins and needles” and “goose bumps”).

EHF therapy has a gentle sedative effect which, in the event of individual heightened sensitivity to EHF radiation may lead to drowsiness and drop in attention span. In such an event work that requires concentration should be limited, including driving, after the procedure. Alternatively, the procedure should be applied before sleep.

2.2. Contraindications of the Use BRR and EHF-Therapy:

- Under an undetermined diagnosis.
- Under individual intolerance to this type of therapy.
- During pregnancy.
- In the presence of implanted devices with autonomous power supply, such as a pacemaker and the like.

3 DESCRIPTION OF THE METHOD



3.1. The basis of the method

CEM®-TECH is a portable two-channel apparatus with interchangeable oscillators, which help to operate in all modes detailed in Tables 1, 2 and 3.

CEM®-TECH is produced by Spinor LLC (Tomsk).

CEM®-TECH apparatus is intended for treatment of patients using low-intense (information) radiation of the highest frequency (EHF) and BRR on projections of large vessels, affected organs, or on pathologic (or pain) centre, and/or biologically active points (BAP) with interchangeable oscillators of various modulation frequencies and radiation spectrum.

3.2. Hardware for the method

The method is executed with the help of CEM®-TECH apparatus, which forms noise-type radiation spectrum that has regulating effect on human body. All EHF-oscillators have noise radiation spectrum, typical for Gunn diode, and provide the work in BRR mode.

The apparatus should be operated according to the Passport and Exploitation's manual.

3.3. Technical description of the CEM®TECH apparatus

The apparatus consists of a power and control unit (PCU), and oscillators that are connected to the PCU via cable.

CEM®TECH apparatus includes standard AA LR06 batteries.

Battery capacity is sufficient for approximately 3 months of everyday use.

The package contents of the apparatus comply with the manufacturer's documentation.



**Exterior EHF oscillator
and cable**

Contacts for attachment

of oscillators

Display

Buttons

for mode control

(MODE)

Button for starting

of therapeutic mode

(START)



Front view of the apparatus



Battery compartment is open



Battery compartment is closed

Rear view of the apparatus

3.4. Setting Up the CEM® TECH apparatus, mode selection, and apparatus maintenance

1. Insert 2 AA batteries into the apparatus (if they are not supplied with the apparatus).
2. Close the battery compartment.
3. Connect the oscillators to the apparatus using the cables.
4. Select the necessary mode by pressing the Mode button.
5. Image of the display in the selected mode shows information on the number of the mode and the length of the procedure in seconds.
6. Start the apparatus in the selected mode by pressing the START button.
7. When the apparatus is working in the selected mode, the display shows graphic and digital information on the duration of the procedure in seconds.

Evidence that the apparatus is working properly lies in the presence of the marker (I and/or II) located in the lower line and which specifies that the channel is working, the changing time on the display and, simultaneously, the quiet “chirring” of the apparatus.



If the oscillator has failed or for any reason it is not connected to the apparatus, the apparatus will “chirr”, but the display will show nothing. After the procedure is complete, the “chirring” will stop, and the time indicator will arrive at zero.



Protect the apparatus and do not allow any liquid to get into the apparatus, especially inside the oscillator. The apparatus and oscillators can be disinfected only by wiping with cotton or a napkin, slightly moistened with alcohol or a special disinfectant solution that causes no damage to plastic.

8. When working with the apparatus according to Table 2 with BAP MC.6 (nei-guan) and with C.7 (shen-men), use a cardiologic clip to fix the oscillator on the patient's body.

9. The therapeutic procedure is performed in a sitting or horizontal position. To perform the procedure, select the therapy program, according to sections 4—6 of this Manual. Attach the

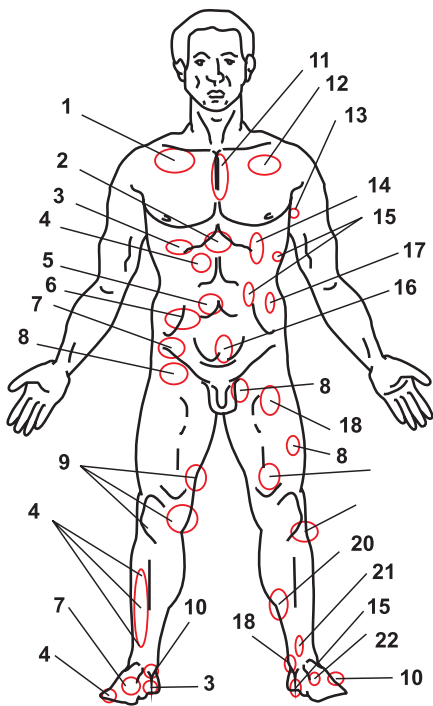
oscillator with a plaster onto the projection zone, the oscillator's working side (white and smooth, without the ring) down. Start the apparatus according to section 3.4.



4 OPERATING MODE ON PROJECTION ZONES

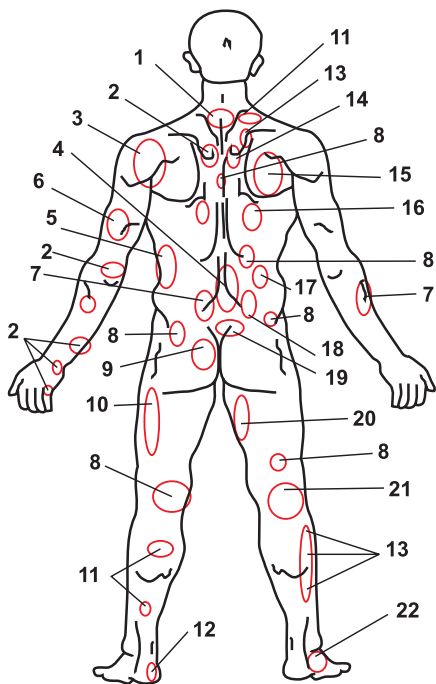


This mode is the easiest to use and it is the basis for a beginner. Select the zone of influence that corresponds with the illness (see Figure 1) and fix the oscillator with a medical plaster. Select the organ or organ-system with pathologic changes in Table 1 and the corresponding mode on the display of the apparatus. Conduct a therapy session. After that simply leave the oscillator on the chosen zone; the BRR therapy will be follow automatically.



Front view

1. Pulmonary abnormalities
2. Gastritis
3. Liver disorders
4. Gallbladder diseases
5. Disorders of the small intestine
6. Disorders of the large intestine
7. Renal abnormalities
8. Changes in hip joint
9. Changes in knee joint
10. Urinary bladder diseases
11. Stenocardic syndrome
12. Heart failure
13. Heart ischemia
14. Spleen diseases
15. Pancreatic abnormalities
16. Prostate gland and urinary bladder diseases
17. Sigmoid colon abnormalities
18. Sexual disorders
19. Maldigestion
20. Diseases in sexual sphere
21. Loss of acuity of vision
22. Stomach diseases



Rear view

1. Osteochondrosis of the cervical spine
2. Heart disorders
3. Spleen diseases
4. Gastric ulcer
5. Pancreas abnormalities
6. Stomach diseases
7. Disorders of the large intestine
8. Renal abnormalities
9. Sexual disorders
10. Changes in hip joint
11. Ureter abnormalities
12. Urinary bladder diseases
13. Gallbladder diseases
14. Bile duct diseases
15. Pulmonary abnormalities
16. Liver disorders
17. Adrenal gland diseases
18. Disorders of the small intestine
19. Diseases of organs of small pelvis
20. Changes in knee joint
21. Knee joint ligament impairment
22. Rectum abnormalities

Table 1

Selection of the mode of low-frequency modulation and oscillators in the CEM®TECH apparatus when treating certain diseases, including the use of projection zones of organs. **Use Oscillator № 4**

Number of the mode on the indicator of the apparatus. Time of session	Functional disorder of an organ or organ system accompanied by pathological changes	Recommended zones of influence, according to Table 1
1 10 minutes	Mode of EHF-therapy	Action is recommended on projection zones of organs, large vessels and pathological centres

<p>2 1 minute</p>	<p>BRR Mode</p>	<p>Action is recommended on areas of greatest pain, projection zones of the organs, large vessels and pathological centres</p>
<p>3 10 minutes</p>	<p>Disorders caused by stress-related factors</p> <p>Neurotic disorders connected with stress, accompanied by normal or high arterial blood pressure</p> <p>Neurotic disorders connected with stress, accompanied by low arterial blood pressure</p> <p>Illnesses of the throat and larynx</p>	<p>See Table 2 for BAP selection.</p> <p>Use cardiological clip (acquired separately)</p> <p>See Table 2 for BAP selection.</p> <p>Use cardiological clip (acquired separately)</p>
<p>4 10 minutes</p>	<p>Tonsillitis, pharyngitis, laryngitis etc.</p>	<p>Directly on the projection of the painful area.</p>

Number of a mode on the indicator of the apparatus. Time of a session	Functional disorder of an organ or organ system accompanied by pathological changes	Recommended zones of influence, according to table 1
5 10 minutes	Illnesses of the cardiovascular system	
	Stenocardia syndrome	11—front
	Heart failure	12—front; 2—behind
	Heart ischemia	13—front; 2—behind
	Arterial hypertension	See Table 2 for BAP selection
	Arterial hypotension	See Table 2 for BAP selection
	Illnesses of blood vessels (varicose dilatation of lower extremities, obliterating endarteritis etc.)	Directly on the projection of the painful area

6 5 minutes	Illnesses of respiratory organs	Directly on the projection of the painful area 1—front 15—behind
	Tracheitis, bronchitis	1—front; 15—behind
	Bronchial asthma etc.	
7 10 minutes	Illnesses of endocrine system	
	Diabetes compensated and subcompensated.	4, 15—front; 5, 16—behind.
	Thyroid gland illnesses	Directly on the projection of the painful area
	Illnesses of digestive organs	
	Pancreas (chronic pancreatitis)	15—front; 16—behind
Liver and gall bladder (dyskinesia bile-excreting tracts, non-calculous cholecystitis; consequences of hepatitis etc.)	№ 4—front; 13, 14, 16—behind	

Number of a mode on the indicator of the apparatus. Time of a session	Functional disorder of an organ or organ system accompanied by pathological changes	Recommended zones of influence, according to table 1
<p style="text-align: center;">7</p> <p>10 minutes</p>	<p>Illnesses of digestive organs</p> <p>Stomach and a duodenal gut (a gastritis, not complicated stomach ulcer etc.)</p> <p>Intestines (dysbacteriosis, colitis, hemorrhoids etc.)</p>	<p>2, 14—front; 4, 6—behind</p> <p>5, 6, 17—front; 7, 18, 22—behind</p>
	<p>Illnesses of musculoskeletal system and connective tissue</p> <p>Upper extremities (arthrosis, arthritis etc.)</p>	<p>Directly on the projection of the painful area</p>
<p style="text-align: center;">8</p> <p>10 minutes</p>		

<p>8 10 minutes</p>	<p>Illnesses of musculoskeletal system and connective tissue</p>	<p>9—front; 10, 20, 21—behind. Directly on the projection of the painful area</p>
	<p>Lower extremities (arthrosis, arthritis etc.)</p>	<p>Directly on the projection of the painful area</p>
	<p>Widespread osteochondrosis with neurologic manifestations and scoliosis</p>	<p>Directly on the projection of the painful area</p>
<p>9 4 minutes</p>	<p>Consequences of musculoskeletal system traumas (badly consolidating fractures, reflex sympathetic dystrophy etc.)</p>	<p>Directly on the projection of the painful area</p>
	<p>Illnesses of urinogenital system</p>	
	<p>Kidneys (pyelonephritis, nephrolithiasis etc.)</p>	<p>7—front; 8—behind</p>

Number of a mode on the indicator of the apparatus. Time of a session	Functional disorder of an organ or organ system accompanied by pathological changes	Recommended zones of influence, according to table 1
9 4 minutes	Illnesses of urinogenital system	
	Bladder (cystitis, urinary incontinence in women etc.)	10, 16—front; 19—behind
	Prostate gland (prostatitis)	16, 18, 20—front; 9, 19—behind
	Uterus (myoma of the uterus in the post-operative period) Ovaries (dysmenorrhea, adnexitis etc.)	9, 19—behind. Directly on the projection of the painful area Directly on the projection of the painful area

10 3 minutes	Illnesses of skin and subcutaneous fat	
	Allergic dermatosis etc.	Directly on the projection of the painful area
11 10 minutes	Operating mode on BAP	See Table 2 for BAP selection

Explanations to table 1.

Projection zones (PZ) of organs are zones of reflex indications that are situated in the place of the direct projection of an affected organ or organ system, as well as in the form of “unclear” pains, not connected with a direct projection to the skin of the affected organ (for example, in illnesses of the liver, gall bladder and kidneys, pains are frequent in the vicinity of a thoracic part of the spinal column and humero-scapular area). Correct location of such zones is shown in Figure 1 and should be used together with the Table of zones of conformity. For treatment of diseases of paired organs, use symmetric zones. The zones presented in Figure 1 do not reflect all pathologic conditions even those that are widespread. Therefore, in such cases, apply the oscillator to the most painful zones of the organ or organ system with pathological changes. In treatment of certain diseases (for example, neurotic disorders and hypertension) the use of biologically active points (BAP) is the most expedient (see Table 2).

5 OPERATING MODE ON BIOLOGICALLY ACTIVE POINTS (BAP)



This mode demands certain specialized skills and attentiveness to find BAP. Consult a specialist in case of difficulty or uncertainty in finding BAP.

Choose the BAP that corresponds to the illness of an organ or organ system (see Table 2). Fix the oscillator on the selected point, turn on mode №11 and conduct a medical session. Once the session is complete, simply leave the oscillator on the selected BAP; BRR therapy will follow automatically.

It is recommended to start a course of treatment of any pathology, specified in Table 1 and 2, with the CEM®TECH apparatus, with an “antistress” technique. The method of treatment of stress conditions provides sedative, antidepressant, and analgesic effects. It facilitates the impact on BAP, as stated in Table 1 and 2 under neurotic disorders, connected with stress, with normal, high or low arterial pressure.

Therapy is carried out as follows. Oscillators should be imposed on specified acupuncture or (synonymous name) biologically active points — BAP (Table 2). Use a cardiological clip to fix the oscillator to the wrist. Use a medi-

cal plaster to secure the oscillator to the body. Recommended exposure time is 10 minutes. The apparatus disconnects automatically, so, if the patient falls asleep, it is possible to leave it on the place of influence. A standard course of treatment is 10 daily procedures before sleep. If a patient suffers only from neurotic disorders (without accompanying pathology), with an interval ranging from two weeks to about two months (depending on how they are feeling), a second session should be started (7 sessions); after that maintenance sessions (once a week) are recommended.

A therapeutic session can be performed as a situation arises, such as upon the sudden advent of a state of stress or sleeplessness. Select the BAP depending on your arterial blood pressure (see Table 2 for directions), fix the oscillators and conduct the necessary number of antistress therapy sessions according to the given method.

Table 2

Selection of biologically active points (BAP),
recommended to improve the effectiveness of CEM®TECH
for treatment of certain diseases

Disorder of the functional condition of an organ or organ system	Recommended BAP
Neurotic disorders connected with stress, accompanied by normal or high arterial blood pressure	MC.6 (nei-guan) — on the right for right-handed, on the left for left-handed
Neurotic disorders connected with stress, accompanied by low arterial blood pressure	C.7 (shen-men) — on the right for right-handed, on the left for left-handed

Functional condition disorder of an organ or organ system	Recommended BAP
Neurological illnesses	
Headache, brain lesions of traumatic, vascular and toxic-infectious genesis	Influence on the projection of the carotid artery, VB.20 (fen-chi)
Polynuropathy, mononeuropathy (facial, trifacial and other nerves)	TR.22 (he-lyao) E.36 (tczy-san-li)
Immunodeficiency states and infections	GI.4 (he-gu); E.36 (tsu-san-li); every other day; P.7 (le-tsue); RP.2 (da-du)
Functional disorder of the organs of sight	VB.14 (yan-bai); E.2 (sy-bai)
Diseases affecting the ear and mamillary appendices (otitis, cochlear neuritis, mastoiditis etc.)	YG.19 (tin-gun); VB.12 (van-gu, or toi-van)

Illnesses of the throat and larynx (tonsillitis, pharyngitis, laryngitis etc.)	Gi.11 (tsui-chi); Y.19 (tszy-gun)
Illnesses of the oral cavity and teeth (stomatitis, periodontitis, gingivitis etc.)	E.4 (di-tsan); E.6 (tszya-che)
Illnesses of the nose and paranasal sinus (rhinitis, antritis, frontitis etc.)	GI.20 (in-syan); E.2 (sy-bai)
Illnesses of the endocrine system (compensated and subcompensated diabetes)	RP.4 (gun-sun)
Illnesses of cardiovascular system	
Cardioneurosis	C.7 (shen-men)—on the right
Arterial hypertension	Gi.15 (tszyan-yui); MC. 6 (nei-guan)
Arterial hypotension	E.36 (tszu-san-li)—only on the left

Functional condition disorder of an organ or organ system	Recommended BAP
Illnesses of the blood vessels (varicose dilatation of the lower extremities, obliterating endarteritis etc.)	E.36 (tszu-san-li); RP.9 (in-lin-tsuan)
Illnesses of respiratory organs:	
Tracheitis	Y.19 (tszy-gun)
Bronchitis, bronchial asthma	P.9 (tai-yuan); Gi.4 (he-gu)
Illnesses of the digestive apparatus	
Stomach and a duodenum (gastritis, non-complicated stomach ulcer etc.)	E.36 (tszu-san-li); C.7 (shen-men)
Liver and gall bladder (dyskinesia of bile-excreting tracts, non-calculous cholecystitis; consequences of the hepatitis etc.)	VB.37 (guan-min); F.14 (tsi-men)

Pancreas (chronic pancreatitis)	RP.4 (gun-sun); RP.6 (san-in-tszyao)
Intestines (dysbacteriosis, colitis, hemorrhoids etc.)	V.25 (da-chan-shu)
Illnesses of the musculoskeletal system and connective tissue	
Upper extremities (arthrosis, arthritis etc.)	Gi.4 (he-gu); VB.20 (fen-chi)
Lower extremities (arthrosis, arthritis etc.)	V.63 (tszin-men); VB.34 (yan-lin-tsuan)
Widespread osteochondrosis	V.60 (kun-lun); V.28 (pan-guan-shu)
Consequences of traumas of musculoskeletal system (badly consolidating fractures, reflex sympathetic dystrophy etc.)	RP.2 (da-du); TR.5 (vai-guan)

Functional condition disorder of an organ or organ system	Recommended BAP
Illnesses of urogenital system	
Kidneys (pyelonephritis, nephrolithiasis etc.)	R.6 (chzhao-hai); V.60 (kun-lun)
Bladder (cystitis, urinary incontinence in women etc.)	V.28 (pan-guan-shu)
Prostate gland (prostatitis)	E.30 (tsi-chun)
Uterus (myoma of the uterus in the post-operative period)	F.5 (li-gou); RP.6 (san-in-tszyao)
Ovaries (dysmenorrhea, adnexitis etc.)	R.7 (fu-lu)
Illnesses of the skin and subcutaneous fatty cellular tissue (allergic dermatosis and others)	P.7 (le-tsyue); RP.2 (da-du)

Oncological illnesses	
Benign tumours, precancerous conditions and malignant neoplasms of different localizations	E.36 (tzu-san-li); RP.2 (da-du)
Narcology	
Chronic alcoholism, drug abuse	MC.6 (ney-guan) on the right for right-handed, on the left for left-handed

Explanations to table 2.

Biologically active points, specified in Table 2, were selected allowing for the results of clinical research of the CEM®TECH apparatus, recommendations of centuries-old practice of oriental medicine, their accessibility for the non-professional user and their convenient arrangement for oscillator fastening. Considering the apparatus's ability to render an influence simultaneously on two points, a formulation of two points is offered, according to the disease that is specified in brackets.

Recommendations on the use of oscillators' № 1—3 with the basing fixed wave length stated in Table 3. **Use Mode № 1.** Profile BAP are stated in Table 2.

Table 3

Recommendations for the use of fixed frequencies in the EHF spectrum

Wave length mm	Oscillator №	Diseases and effects	Area of influence
7.1	1	Herpes	
7.1	1	Vitiligo	
5.6	2	Neurodermatitis, eczema	On the lesion focus
7.1	1	Psoriasis	
5.6	2	Post-traumatic contractures	
5.6	2	Asthma	
4.9	3	Obstructive bronchitis	On projection zones №1 (from the front) and 15 (from behind) and corresponding BAP
5.6	2	Sarcoidosis	

Wave length, mm	Oscillator №	Diseases and effects	Area of influence
7.1	1	Cholecystitis	On projection zones №4 (from the front) and 13, 14 (from behind) and corresponding BAP
4.9	3	Stomach ulcer and duodenal ulcer	On projection zones №2 and 22 (from the front) and 4 and 6 (from the back) and corresponding BAP
5.6	2	Oophoritis	On projection zones №18 and 20 (from the front) and 19 (from the back) and corresponding BAP

7.1	1	Paradontitis and other inflammatory diseases of the oral cavity	On facial projection zones (diseases zones)
4.9	3	Immune stimulation	On chest area
7.1	1	Haematosi	On chest area and projection zones of large vessels
5.6; 7.1 simultaneously	1; 2	Vegetative dysfunction of cardiovascular system (vegetative dystonia syndrome)	On corresponding BAP and projection zones of large vessels

EHF therapy and therapy with BRR in oncology facilitates a solution to the following problems:

- 1.** Preparation of patients with malignant neoplasms with basic localizations for stages of combined treatment (preparation of organs and systems for surgical trauma, radio lesions, and drug-based aggression).
- 2.** Treatment of concomitant diseases and prophylaxis of complications.
- 3.** Prevention and liquidation of complications after special treatment methods.
- 4.** Treatment of paraneoplastic syndrome.
- 5.** An enhanced effectiveness of other treatment methods.
- 6.** Symptomatic therapy of incurable patients.
- 7.** Systematic correction of ecologic and pre-oncology pathology.
- 8.** Prevention of the progression of the tumour process after combined treatment.

- Under no circumstances does EHF-therapy for oncology disease treatment exclude the use of standard therapy methods.
- EHF-therapy in narcology is applied under mandatory supervision of a doctor and it helps to obtain positive changes in an emotional sense and improve the functioning of internal organs.





6 BACKGROUND RESONANCE RADIATION THERAPY (BRR THERAPY)



Therapy using background resonant radiation or BRR therapy is one of the main elements of the therapy proposed using the CEM®TECH apparatus, and it can be used after the aforementioned sessions of EHF-therapy with modes of low-frequency modulation on the same projection zone and BAP using the same chosen oscillator; it can be also used independently in Mode №2 (Table 1).

If you have already undergone a medical session on one of the chosen modes, according to Table 1 or Table 2, simply leave the oscillator on the selected projection zone or BAP; BRR therapy will be performed automatically.

If you use BRR therapy as an independent procedure, adhere to the following rules.

Sequence of actions when recording the spectrum of electromagnetic radiation of a pathogenic zone and therapy using the recorded spectrum in BRR mode:

- Attach the cable to the case through socket № 1 or № 2.

- Attach oscillator №4 to the cable.
- Place the oscillator, working side (smooth, white, without a ring) down, onto the projection zone, specified in Table 1 or to the place of the pain. In cases of open ulcers, wounds and burns, the affect can be applied through a bandage, or the oscillator can be placed near the affected zone.
- Fix the oscillator with a plaster, ensuring that the ability to remove the cable easily is retained.
- Press the Mode button twice: MODE 2 will be displayed
- Press the START button. It takes up to 60 seconds to record the electromagnetic radiation spectrum of the pathological area. As time indications of the procedure change, a sound signal is heard. In 60 seconds the sound

signal disappears. The apparatus disconnects automatically.

- Disconnect the cable from the oscillator.

After the recording of the electromagnetic radiation parameters of the pathological centre is complete, immediate suppression of this radiation during a session in BRR mode takes place, which subsequently leads to a reduction or the elimination of the pathology.

Sometimes, for an accelerated clinical effect, it is possible to “record” the radiations of two pathological zones simultaneously.

Working in BRR mode using two oscillators, it is necessary to observe the following condition: **each oscillator needs to be attached to the exact place from where it “recorded” the radiation.** In case of a pain syndrome, hypostasis, inflammation and other local changes, in addition to the influence on the projection zones or BAP specified in Table № 1, attach the generator to the place of greatest pain and undergo the necessary number of sessions in “record-influence” mode before the syndrome

improves or disappears. In cases of chronic processes the oscillator should be left on the pain zones for approximately 12 to 24 hours.

7 IMMUNOSTIMULATION MODE



Immunostimulation using BAT (Table 2) is recommended to run over 10 sessions (every other day) at least twice a year when the season changes (the beginning of spring, the beginning of autumn).

Procedure technique:

- Make yourself comfortable.
- Press the oscillator attached to the apparatus through the cable, working side (smooth, white, without a ring) down to the BAP specified in Table № 2.
- Keep pressing the Mode button until Mode № 11 appears on the display.
- Press the START button; a sound signal will be heard and you will see the time countdown on the display.
- After the procedure time has passed, the sound signal will disappear and the apparatus will automatically switch off.

Each selected point is influenced individually. To switch the apparatus off before the set time of the procedure press the START button.

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8 POSSIBLE COMPLICATIONS IN USING THE TECHNIQUES



Exact observance of the above recommendations eliminates complications.



9 LIST OF PRINCIPAL SOURCES OF LITERATURE



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