

**“Apparatus EHF-IR therapies porTable
with changeable oscillators “CEM TECH”
Owner’s Manual
«CEM[®]» CORPORATION**



**Owner’s manual
«CEM[®] -TECH» device**

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Attention! The device is a complex product of medical equipment. Its use is allowed only after examination of the Passport and with strict observance of exploitation rules, security measures, and also with the observance of clinical use rules that are stated in this Owner's manual. Close attention should be paid to contraindications to use of the device.

Annotation

The manual is intended for beginners as well as for specialists: reflexotherapists and physiatrists, doctors of regenerative medicine, therapists and non-traditional medicine specialists. Home use of the device by patients does not mean the absence of necessity of the constant control and supervision over their condition by attending physicians.

The device passed clinical testing with numerous functional and laboratory tests that objectively recorded positive dynamics of treatment of many diseases. For specialists, the main theoretical action theses of BRR and EHF-radiation therapy are shortly described. Also, there is a list of recommended literature for closer studying of EHF-therapy.

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

1. Introduction

Modern methods of treatment in many cases are used with toxic pharmaceutical products. The use of EHF-therapy in a complex treatment allows to increase treatment effectiveness in many cases, as well as to decrease toxic load on the body. In some diseases, for example, concerned with the disturbance of blood microcirculation, the use of EHF-therapy allows to execute treatment in monotherapy mode.

EHF-therapy belongs to 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 home conditions.

Hereinafter, under EHF-therapy, the following mode is implied: broadband noise radiation, which spectrum density power allows to include all individual frequencies, influencing the body, in the spectrum diapason. Accordingly, in all cases, fixed frequencies were constituents of noise power spectrum as a whole, and further in text, for other frequencies values, aforesaid should be understood. «CEM[®]-TECH» device provides this EHF-therapy mode.

«CEM[®]-TECH» device also utilizes broadband resonance radiation (BRR) by Gunn diode, which is concerned with registration and reradiation of own

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frequencies characteristics of an object (body tissues, microorganisms and parasites, physiologically active substances and others).

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

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

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

The depth of penetration of EHF-radiation when to human's skin surface is 300-500 mkm, i.e. it is almost completely absorbed by epidermis and top layers of derma. The zone of its direct action covers nervous system receptors (mechanoreceptors, nociceptors, free nerve endings); capillary channel of 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,
- ~ blood aggregative state regulation system (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 modern method of EHF-therapy, which is based on the technology of material use with controlled energy structure. They were created according to the special technology on the basis of gallium arsenide, and capable «to remember» external EHF-radiation thus forming exact similarity of signals of the pathogenic and/or medical factor. This allows influencing an organism not only in a classical mode EHF-therapy, but also in a mode of background resonant radiation (BRR). These modes are executed by «CEM[®]-TECH» device.

Clinical approbation has shown that EHF and BRR are especially effective in cases of medication intolerance, presence of contra-indications to methods of traditional physio- and reflexotherapies, as well as insufficient efficiency of the mentioned ways of treatment.

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

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- 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 dismunnoglobulinaemia 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 (Tumanyac E.E., Termuryanc N.A., 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 -rhythm (Gubarec M.Y., 1989), and rehabilitation of initially disturbed interzonal and interhemispheric interrelations of basic electroencephalogram rhythms (Stolbikov A. E. and et al, 1991);
- Activation of hemopoiesis in red bone marrow (Lebedeva N.N., Kotrovskaya T.I., 2002);
- Normalization of rheological blood properties (lowering of blood viscosity, increase of erythrocytes deformation (Parshina S.S. and et al, 2003));
- Normalization of coagulant and anticoagulative factors balance (normalization of antithrombin III level (Lopatina N.A. and et al, 2003), normalization of fibrinolytic activity and thrombocyte hemostasis (Bukatko V. N., 2003));
- Normalization of vessel tone and microcirculation activation (normalization of endothelium vessel reactivity (Parshina S.S. and et al, 2003), normalization of rheogram indicators (Dikke G.B., 1999; Afanaseva T.N., Petrova V.D., 1995) and rheoencephalogram indicators (Tcarev A.A., Kudinova M.A., 1997));
- Normalization of vegetative regulation, stabilization of sympathetic and parasympathetic parts ratio of vegetative nervous system (Dikke G.B., 1999)
- Normalization of pro- and anti-oxidant systems ratio (Tumanyac E.E., Temuryanc N.A., 1997);
- Activation of cell regeneration (increase in proliferation of fibroblasts (Polyakova A.G. et al., 1999));
- Normalization of catecholamine and sexual hormones secretion (Tcarev A.A., Kudinova M.A., 1997; Zaporozhan V.N. et al., 1997);
- Influence on endogenous opioid system (Radzievsky et al., 2001), activation of antinociceptive system (Kirova B.N., 2000);

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- Antistress action – suppression of excessive activity of symphato-adrenal system and activation of stress-limiting systems (Chuyan E.N., Temuryanc N.A., 2005)
- Suppression of influenza virus reproduction inside the cells and viricidic effect (Podchernyaeva R.Y. et al., 2004);
- Rehabilitation of mononuclear ability to secrete γ -interferon, which enables the decrease in possibility of cancer development for risk group patients (Sitko S.P. et al., 1993);
- Cytoprotective action towards red marrow cells and liver during polychemotherapy (Karaeva N.P. et al., 2006);
- Change in structure-dynamic characteristics of cell membranes (Semina I.G. et al., 2007);
- Anti-inflammatory effect, based on stimulation of mast cell degranulation and measurement of phagocytes' functional activity in the center of inflammation (Gapeev A.B, Chemeris N.K., 2007);
- Inhibition of skin, liver, and brain aging processes (Rodshtat I.V., 2007).

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

Normalizing effect from the use of these modes of «CEM[®]-TECH» device allowed omit in the given owner's manual the usual description of medical techniques as «concrete illness – therapy technique», using principle of initial restoration regulatory processes with subsequent use of «therapy techniques of organ or organ system illness».

Corresponding influence modes are specified in parts 4, 5, 6 of present Manual. The given in list does not limit indications to use of the device, but any particular case should be consulted with the attending physician, the final diagnosis determined and individual contra-indications eliminated. The initial course of treatment demands obligatory control and/or participation of the specialist.

2. Indications and Contra-indications to Application of the Method

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

Because of the fact that the realization of medical effect of EHF and BRR-therapy with low frequency modulation suggests the use of common biological and adaptive mechanisms, this method is effective (to some extent) for treatment of many illnesses as a part of complex therapy. BRR and EHF-therapy are well combined with other ways of treatment (surgical, medicament, physiotherapy, homeopathy). In some cases, it is possible to use EHF and BRR therapy as monotherapy: as prophylactics and treatment of early stages of acute respiratory disease, pain syndromes therapy for joints pathology in the case of mild acute condition and without expressed anatomic changes, est.

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The list of nosologic forms and syndromes that are positive affected by EHF and BRR-therapy constantly extends. The modes for different diseases, offered by the device, summarize clinical expertise from different groups of researchers. Some of the most effective modes are recommended for doctor’s use, including the use in state clinics. In Appendix 1, there is a list of BRR and EHF-therapy methods that can be practiced with «CEM[®]-TECH» device. These methods are in process of ratification by RussianMedicalTechnologies Federal Agency of Russian Federation.

From the analysis of publications on clinical tests of «CEM[®]-TECH» device, 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 centers;
- ~ shorten the period of in-patient treatment for broad list of diseases;
- ~ widen possibilities of rehabilitation treatment in ambulatory and home conditions;
- ~ execute initial and secondary prophylactics;
- ~ increase the effectiveness of medicament use and, at the same time, reduce the dosage of prescribed medications, and in some cases do not use them at all.

All researchers certify good tolerance of EHF-influence and the absence 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 sensation of “light pricking” and “goose skin”).

2.2. *Contra-indications to the use BRR and EHF-therapy:*

- ~ *unstated diagnosis;*
- ~ *individual intolerance to this type of therapy;*
- ~ *pregnancy;*
- ~ *presence of implanted devices with autonomic power supply, for example, artificial rhythm driver.*

3. Description of the Method

3.1. The basis of the method

«CEM[®]-TECH» is a portable two-channel device with changeable oscillators, which help to operate in all modes stated in Tables 1, 2 and 3.

«CEM[®]-TECH» device is produced by Open Company «Spinor» (Tomsk).

«CEM[®]-TECH» device 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) center, and/or biologically active points (BAP) with replaceable oscillators of various modulation frequencies and radiation spectrum.

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3.2 Method’s hardware

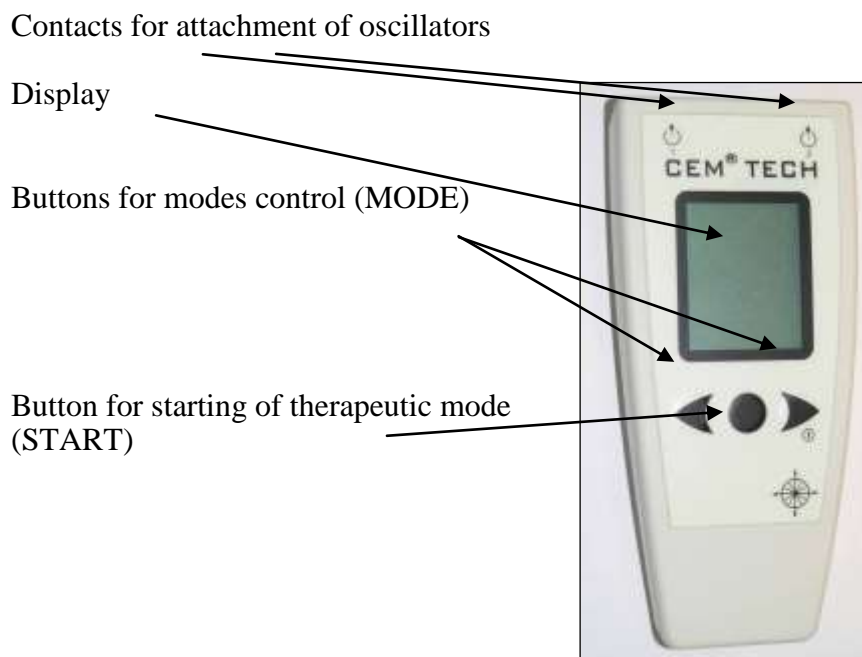
The method is executed with the help of «CEM[®]-TECH» device, which forms noise-type radiation spectrum that has regulating effect on human body. All EHF-oscillators have noise radiation spectrum, typical for Gunn diode, and provide the work in BRR mode.

The device should be operated according to the Passport and Owner’s Manual.

3.3. Technical description of «CEM[®]TECH» device

The device consists of power and control unit (PCU), and oscillators that are connected to PCU with a cable.

Front view of the device



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Rear view of the device



Battery compartment is open

Battery compartment is closed

«CEM[®]TECH» device includes finger-type batteries AA LR03.

Battery capacity is enough for approximately 3 months of every day use.

Completeness of the device complies with the Passport.



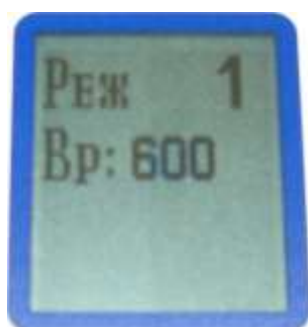
3.4. Setting up the «CEM[®]TECH» device, modes choice, and device maintenance

3.4.1. Insert 2 batteries AA or the charged accumulators (if they are absent in the device).

3.4.2. Close the cover of a battery compartment.

3.4.3. Connect the oscillators to the device using the cables.

3.4.4. Choose the necessary mode by pressing the «Mode» button



3.4.5. Image of the display in a selected mode shows information on the number of the mode and the length of the procedure in seconds.

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3.4.6. Start the device at the chosen mode by pressing the «Start» button.

3.4.7. When the device working in the chosen mode, the display shows the graphic and digital information on duration of procedure in seconds.

The proof of the fact that the device works properly is the presence of the label (I and/or II) located in the lower line and specifying the channel work and time change on the display and, simultaneously, quiet "chirring" of the device.



If the oscillator has failed or for any reasons you have not connected it to the device, the device will "chirr", but the display will show nothing. After the procedure is finished, the "chirring" will stop, and time indicator will come to null.

Protect the device and do not let any liquid to get into the device, especially, inside of an oscillator. The device and oscillators can be disinfected only by rubbing with cotton or a napkin slightly moistened by spirit or a special disinfection solution, non-damageable to plastic.

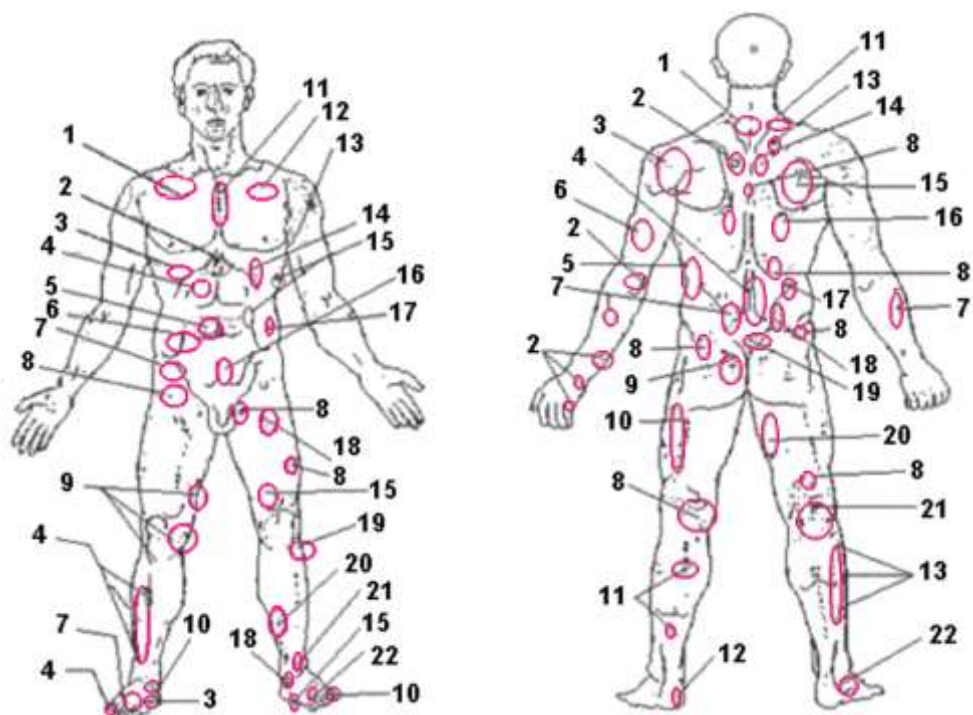
3.4.8. When working with the device according to Table №2 with BAP MC.6 (nei-guan) and with C.7 (shen-men), you should use cardiologic clip to fix oscillator on the body of the patient.

3.4.9. Therapeutic procedure can be done in a sitting or horizontal position. For conducting of the procedure, you should choose a therapy program, according to section 4-6. Attach an oscillator with a plaster on the projection zone, with oscillator's working side (white and smooth) on the body. Start the device according to section 3.4.

3. Operating Mode on Projection Zones

This mode is the easiest to use and it is the basis for the beginner. Choose the corresponding to the illness zone of influence (see Figure №1) and fix an oscillator on it with medical plaster. Choose organ or organ-system with pathologic changes in Table 1 and a corresponding mode on the display of the device. Conduct a therapy session. After that simply leave an oscillator on a chosen zone, the BRR therapy will be carried out further automatically.

Figure 1.



Front view	Rear view
1. Pulmonary abnormalities	1. Cervical part of spinal cord
2. Gastritis	2. Heart abnormalities
3. Liver disorders	3. Spleen diseases
4. Gallbladder diseases	4. Gastric ulcer
5. Fine bowels disorders	5. Pancreas abnormalities
6. Large bowels disorders	6. Stomach diseases
7. Renal abnormalities	7. Large bowels disorders
8. Changes in hip joint	8. Renal abnormalities
9. Changes in knee joint	9. Sexual disorders
10. Urinary bladder diseases	10. Changes in hip joint
11. Stenocardic syndrome	11. Ureter abnormalities
12. Heart failure	12. Urinary bladder diseases
13. Heart ischemia	13. Gallbladder diseases
14. Spleen diseases	14. Bile duct diseases
15. Pancreas abnormalities	15. Pulmonary abnormalities
16. Prostata gland and urinary bladder diseases	16. Liver disorders
17. Sigmoid colon abnormalities	17. Adrenal gland diseases
18. Sexual disorders	18. Fine bowels disorders
19. Maldigestion	19. Diseases of organs of small pelvis
20. Diseases in sexual sphere	20. Changes in knee joint
21. Visual acuity loss	21. Knee joint ligament impairment
22. Stomach diseases	22. Rectum abnormalities

Choosing the mode of low-frequency modulation and oscillators in «CEM®TECH» device when treating some diseases, including the use of projective zones of organs. Use the oscillator №4.

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Table 1

Number of a mode on the indicator of the device. Time of a 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	Following the indications. The manual and application advice.
2 1 minute	BRR Mode	Following the indications. The manual and application advice
3 5 minutes	Disorders caused by stressful factors:	
	The neurotic frustration connected with stress, accompanied by normal or raised arterial pressure	See Table 2. 5 minutes (individually chosen); 10 minutes(if recommended by a specialist)
	The neurotic frustration connected with stress, accompanied by the lowered arterial pressure	See Table 2. 5 minutes (individually chosen); 10 minutes(if recommended by a specialist)
4 10 minutes	Illnesses of throat and larynx:	
	Tonsillitis, pharyngitis, laryngitis, etc.	Directly on a projection of painful area. Application advice.
5 10 minutes	Illnesses of cardiovascular system:	
	Stenocardia syndrome	11- front
	Heart failure	12- front 2 - behind
	Heart ischemia	13-front 2- behind
	Arterial hypertension	See tab. BAP
	Arterial hypotonia	See tab. BAP
	Illnesses of blood vessels (varix dilatation of lower extremities, obliterating endarteritis, etc.)	Directly on a projection of painful area
6 5 minutes	Illnesses of respiratory apparatus:	
	Tracheitis, bronchitis	Directly on a projection of painful area 1-front 15-behind
	Bronchial asthma, etc.	1-front 15-behind
7 10 minutes	Illnesses of endocrine system:	
	Diabetes compensated and subcompensated	4; 15 – front 5; 16 – behind Directly on a projection of painful area
	Illnesses of a thyroid gland	
	Illnesses of digestive apparatus:	

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	Pancreas (chronic pancreatitis)	15 – front 16 – behind
	Liver and gallbladder (a dyskinesia bile-excreting tracts, non-calculous cholecystitis; consequences of the hepatites, etc.)	№4- front 13,14,16-behind
	Stomach and a duodenal gut (a gastritis, not complicated stomach ulcer, etc.)	2,14- front 4,6-behind
	Intestines (dysbacteriosis, colitises, hemorrhoids, etc.)	5,6,17- front 7,18,22-behind
8 10 minutes	Illnesses of musculoskeletal system and connective tissue:	
	Upper extremities (arthrosis, arthritises, etc.)	Directly on a projection of painful area.
	Lower extremities (arthrosis, arthritises, etc.)	9- front 10,20,21-behind. Directly on a projection of painful area.
	Widespread osteochondrosis	Directly on a projection of painful area.
	Consequences of musculoskeletal system traumas (badly consolidating crises, a reflex sympathetic dystrophy, etc.)	Directly on a projection of painful area.
9 4 minutes	Illnesses of urinogenital system:	
	Kidneys (a pyelonephritis, nephrolithiasis, etc.)	7- front 8-behind
	Bladder (a cystitis, urinary incontinence in women, etc.)	10,16- front 19-behind
	Prostata gland (prostatitis)	16,18,20- front 9,19-behind
	Uterus (a myoma of a uterus in the postoperative period)	№9,19-behind Directly on a projection of painful area.
	Ovaries (dysmenorrhoea, adnexitis, etc.)	Directly on a projection of painful zone
10 3 minutes	Illnesses of skin and subcutaneous fat:	
	Allergic dermatosis, etc.	Directly on a projection of painful zone
11 10 minutes	Operating mode on BAP	
		BAP - see tab. №2

Explanations to Table №1. Projection zones (PZ) of organs are zones of reflex indications that are situated in a place of a direct projection of an ill organ or organ system, as well as in the form of "not clear", not connected with a direct projection to a skin of the ill organ pains (for example, in liver diseases, a gallbladder, kidneys pains are frequent in the areas of a thoracic part of a spinal column and humeroscapular area). Correct location of such zones is shown in

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Figure 1 and should be used together with the Table of zones of conformity. For treatment of diseases of pair organs use symmetric zones. The zones presented in Figure 1 do not reflect all pathologic conditions even widespread, therefore, in such cases attach oscillator to the most painful zones of the organ or organ system with pathological changes. In treatment of the some diseases (for example, neurotic frustration, a hypertension the use biologically active points (BAP) is more effective, see Table 2.

5. Operating Mode on Biologically Active Points (BAP)

This mode demands some special skills and concentration to find BAP. Consult a specialist in case of difficulty or uncertainty of finding BAP.

Choose a corresponding to an illness of an organ or organ system BAP (see Table 2 for directions). Fix an oscillator on the chosen point, turn on mode №11 and conduct a medical session. After that simply leave an oscillator on chosen BAP, BRR therapy will be automatically carried out.

The course of treatment of any pathology specified in Table 1 and 2, with the «CEM[®]TECH» device is recommended to start with an «antistress» technique. The method of treatment of stress conditions provides sedative, antidepressant, and analgesic effects. It provides the influence of BAP, stated in Table 1 and 2, for neurotic disorders, connected to stress, with normal, increased, or decreased arterial pressure.

Therapy is carried out as follows. Oscillators should be imposed on specified acupuncture (synonymous name) biologically active points - BAP (Table 2). To fix oscillator on a wrist, cardiological clip should be used. To fix oscillator on the body, medical plaster should be used. Recommended exposure time is 10 minutes. The device disconnects automatically, therefore if the patient falls asleep, it is possible to leave it on the place of influence. Standard course of treatment is 10 daily procedures. If a patient suffers only from neurotic frustration (without an accompanying pathology) with an interval ranging from two weeks to about two months (depending on state of health) the second session should be started (7 sessions), after that supporting sessions (once a week) are recommended.

Therapeutic seance can be done situationally, for example, in suddenly arisen stressful condition or sleeplessness. Choose BAP depending on your arterial pressure which, see Table 2 for directions, fix oscillators on the right hand and conduct necessary number of antistress therapy sessions according to the given method.

Selection of biologically active points (BAP), recommended for the improvement of the effectiveness of «CEM[®]TECH» use for treatment of some diseases.

Table 2.

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Functional condition disorder of an organ or organ system	Recommended BAP
The neurotic frustration connected with stress, accompanied by normal or raised arterial pressure	MC.6 (nei-guan) - on the right for right-handed, on the left for left-handed
The neurotic frustration connected with stress, accompanied by lowered arterial pressure	C.7 (shen-men) - on the right for right-handed, on the left for left-handed
Neuralgic illnesses:	
Head ache, cerebral affections due traumas, vascular genesis, infection-toxic genesis	Influence on the projection of carotid artery, VB.20 (fen-chi)
Polyneuropathy, mononeuropathy (face, trifacial and other nerves)	TR.22 (he-lyao) E.36 (tczy-san-li)
Immunodeficiency states and infecitons	GI.4 (he-gu) E.36 (tsu-san-li) in a day P.7 (le-tsue) RP.2 (da-du)
Functional disorder of the organs of sight	VB.14 (yan-bai) E.2 (sy-bai)
Ear and mamillary appendices illnesses (otitis, cochlear neuritis, mastoiditis, etc.)	YG.19 (tin-gun), VB.12 (van-gu, or toi-van)
Illnesses of throat and larynx (a tonsillitis, a pharyngitis, a laryngitis, etc.)	Gi.11 (tsui-chi) Y.19 (tszy-gun)
Illnesses of oral cavity and teeth (a stomatitis, a periodontitis, gingivitis, etc.)	E.4 (di-tsan) E.6 (tszya-che)
Illnesses of a nose and paranasal sinus (a rhinitis, an antritis, frontitis , etc.)	GI.20 (in-syan) E.2 (sy-bai),
Illnesses of endocrine systems (a 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 hypotonia	E.36 (tszu-san-li) – only on the left
Illnesses of blood vessels (varix dilatation of lower extremities, obliterating endarteritis, etc.)	E.36 (tszu-san-li) RP.9 (in-lin-tsuau)
Illnesses of respiratory apparatus:	
Tracheitis	Y.19 (tszy-gun)
Bronchitis, bronchial asthma	P.9 (tai-yuan) Gi.4 (he-gu)
Illnesses of digestive apparatus:	
Stomach and a duodenal gut (a gastritis, not complicated stomach ulcer, etc.)	E.36 (tszu-san-li) C.7 (shen-men)

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Liver and gallbladder (a dyskinesia bile-excreting tracts, non-calculous cholecystitis; consequences of the hepatites, etc.)	VB.37 (guan-min) F.14 (tsi-men)
Pancreas (chronic pancreatitis)	RP.4 (gun-sun) RP.6 (san-in-tszyao)
Intestines (dysbacteriosis, colitises, hemorrhoids, etc.)	V.25 (da-chan-shu)
Illnesses of musculoskeletal system and connective tissue:	
Upper extremities (arthrosis, arthritises, etc.)	Gi.4 (he-gu) VB.20 (fen-chi)
Lower extremities (arthrosis, arthritises, 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 crises, a reflex sympathetic dystrophy, etc.)	RP.2 (da-du) TR.5 (vai-guan)
Illnesses of urinogenital system:	
Kidneys (a pyelonephritis, nephrolithiasis, etc.)	R.6 (chzhao-hai) V.60 (kun-lun)
Bladder (a cystitis, urinary incontinence in women, etc.)	V.28 (pan-guan-shu)
Prostata gland (prostatitis)	E.30 (tsi-chun)
Uterus (a myoma of a uterus in the postoperative period)	F.5 (li-gou) RP.6 (san-in-tszyao)
Ovaries (dysmenorrhea, adnexitis, etc.)	R.7 (fu-lu)
Illnesses of skin and subcutaneous fat cellular tissue (allergic dermatosis and others)	P.7 (le-tsyue) RP.2 (da-du)
Oncology illnesses:	
Non-cancerous growth, precancerous conditions, malignant neoplasms of different localizations	E.36 (tzu-san-li) RP.2 (da-du)
Narcology	
Chronic alcoholism, toxicomania	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 the Table, were chosen according to the results of clinical researches of «CEM®TECH» device, and recommendations of centuries-old practice of the east medicine. Convenience of their arrangement to oscillator fastening was also considered. Considering the device ability to render simultaneous influence on two points, in most cases we offer a composition of two points according to disease, 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.

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Recommendations for the use of fixed frequencies in EHF diapason			
Wave length, mm	Oscillator №	Diseases and effects	Area of influence
7,1	1	Herpes	On the lesion focus
7,1	1	Vitiligo	
5,6	2	Neurodermatitis, eczema	
7,1	1	Psoriasis	
5,6	2	Post-traumatic contractures	
5,6	2	Asthma	On projection zones №1 (from the front) and 15 (from behind) and corresponding BAP
4,9	3	Obstructive bronchitis	
5,6	2	Sarcoidosis	On projection zones №4 (from the front) and 13, 14 (from behind) and corresponding BAP
7,1	1	Cholecystitis	
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 oral cavity	On facial projection zones (diseases zones)
4,9	3	Immune-stimulation	On chest area
7,1	1	Hematosi	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 allows solving the following problems:

1. Preparation of oncology patients with basic localizations for stages of combined treatment (preparation of organs and systems to surgical trauma, radio lesions, and medicament aggression).

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2. Treatment of concomitant diseases and complications prophylactic.
3. Prevention and liquidation of complications after special treatment methods.
4. Treatment of paraneoplastic syndrome.
5. Effectiveness increase of other treatment methods.
6. Symptomatic therapy of incurable patients.
7. Systematic correction of ecologic and pre-oncology pathology.
8. Prevention of tumor process progression after combined treatment.

! EHF-therapy for oncology diseases treatment does not exclude the use of standard therapy methods in no circumstances.

! EHF-therapy in narcology must be used under doctor’s supervision, and, it allows getting positive changes in emotional sphere and improving the functioning of internal organs.

6. Broadband Resonance Radiation therapy (BRR therapy)

Therapy using background resonant radiation or BRR therapy is the main or one of the main elements of the suggested therapy by «CEM®TECH» device, and can be used after the above described 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 an oscillator on chosen projection zone or BAP, BRR therapy will be carried out automatically.

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

Recommended sequence of actions for recording a spectrum of electromagnetic radiation of a pathogenic zone and therapy by the written down spectrum in BRR mode:

- Attach the cable to the case through a socket №1 or 2.
- Attach oscillator №4 to the cable.
- Place the oscillator with working (smooth, white, without a ring) side to the projection zone, specified in Table 1 or an aching spot. In cases of open ulcers, wounds and burns it is possible to influence through a bandage, or place the oscillator near the affected zone.
- Fix the oscillator with a plaster, leaving some space, so the cable can be easily removed.
- Press the «Mode» button two times, MODE 2 will be displayed
- Press the «Start» button. It takes up to 60 sec to record the electromagnetic radiation spectrum of pathological area. As time indications of procedure change, sound signal comes up. In 60 seconds the sound signal disappears. The device disconnects automatically.
- Disconnect the cable from the oscillator.

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On recording electromagnetic radiation parameters of the pathological center immediate suppression of this radiation during a session in BRR mode takes place, which subsequently leads to elimination of pathology.

Sometimes, for prompt clinical effect, it is possible «to photograph» radiations of two pathological zones simultaneously.

Working in BRR mode using two oscillators, it is necessary to observe a following condition: *each oscillator needs to be attached to the exact place of which it «photographed» the radiation.* In case of a pain syndrome, hypostasis, inflammation and other local changes, in addition to the influence on specified in Table №1 BAP, attach the generator to a place of a greatest morbidity and undergo necessary quantity of sessions in a «record-influence» mode before disappearance or substantial improvement of a syndrome. In cases of chronic processes the oscillator should be left on pain zones for approximately 12 - 24 hours.

7. Immunostimulation mode.

Immunostimulation with the use of BAT (Table 2) is recommended to undergo for 10 sessions (every other day) not less than twice a year at the season change (the beginning of spring, the beginning of autumn).

Procedure technique:

- Take the most convenient position for you.
- Press the oscillator attached to the device through the cable, operator (smooth, white, without a ring) side to a BAP specified in Table №2.
- Press consistently the «Mode» button till appearance on the display of mode №11.
- Press the «Start» button, a sound signal will come up and you will see time countdown on the display.
- After the time will pass, the sound signal will disappear and the device will automatically switch off.

Each chosen point is influenced individually. To switch the device off before the set time of the procedure press the «Start» button.

You can find medicine and biotechnological CEM®-technology news on www.cem-tech.ru web site.

8. Possible complications in the use of the technique

Exact observance of the above recommendations eliminates complications.

9. List of basic sources of literature:

“Apparatus EHF-IR therapies portable with changeable oscillators “CEM TECH”

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10. Appendix

The list of the new and advanced medical technologies using in complex treatment the EHF-IR-THERAPY «CEM®-TECH» device, already and being now approved in Russian Federal Agency of Medical technologies.

1. EHF-THERAPY in preparatory period of surgical treatment of ischemic heart diseases.-Methodical recommendations 99/193 (it is approved by Federal Agency for Public health and social development 25.05.2001.) Authors: Ph.D. O.E.Golosova, DSc., prof. E.F.Levitsky, DSc., prof. T.D.Gridneva, Ph.D.,A.M.Chernjavsky, Ph.D.. A.M.Kozhemjakin.
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6. Millimetric waves in treatment of patients with neurologic displays of an osteochondrosis of a backbone. - New medical technology 2000/199 (it is approved by Federal Agency for Public health and social development in 2000) Authors of technology: DSc., prof. E.F.Levitsky, Ph.D. Mirjutova N.F., Mavljautdinova I. M., Ph.D. Kozhemjakin A.M.
7. Optimization of regenerative treatment of osteoarthritis combined with platypodia.- Advanced medical technology (registration certificate ФC-2006/126-Ò from June, 14th 2006, released by Federal Agency for Public health and social development). Authors: Ph.D. E.V.Titskaja, Ph.D. G.G.Reshetova, Ph.D. E.V.Mihajlova, Ph.D.N.G.Abdulkina, Ph.D. O.V.Dostovalova, Ph.D.. V.F.Savrasov, Ph.D. O.M.Tkachenko, Ph.D. V.D.Zavadovskaja, Ph.D. T.B.Perov.
8. Electromagnetic radiation of the EHF-RANGE in regenerative treatment of neuro-orthopedic disorders in children with lumbar osteochondrosis and teenagers with idiopathic scoliosis. - the advanced medical technology (registration certificate ФC-2006/039-Ò from April, 10th 2006, released by Federal Agency for Public health and social development, it is valid till November, 11th 2009r.). Authors: DSc., prof. E.F.Levitsky, DSc., prof. Mirjutova N.F., Ph.D. Abdulkina N.G., Ph.D.. Kozhemjakin A.M., Lipina E.V., Bartfeld N.N.
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14. Complex application of phisio-balneotherapy methods in treatment of hysteryoma. Methodical recommendations: Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.
15. Complex phisio-balneotherapy in climacteric frustration in men. Methodical recommendations: Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.
16. Restoration of sexual and reproductive health in men, suffering excretory-toxic male sterility at a sanatorium stage of treatment. Methodical recommendations: Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.
17. Application of EHF-THERAPY in complex treatment of various forms of psoriasis. Methodical recommendations: Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development, the Siberian state medical university.
18. Optimization of electromagnetic millimetric therapy administration in ischemic heart illness in sanatorium establishments. Methodical recommendations: Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.
19. Application of EHF-THERAPY in complex rehabilitation of patients with exogenous-organic brain injury. Methodical recommendations: Tomsk scientific research institute of mental health, Tomsk regional psychiatric hospital, Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.
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22. Treatment of women after operations for uterus and its appendages using EHF-THERAPY. Methodical recommendations: Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.
23. The use of therapy of background resonant radiation for stopping pain syndrome at neuro-vertebrogenious diseases Scientific research institute of traditional methods of treatment of the Federal Agency for Public health and social development (Moscow, All-Russia research and test institute of medical techniques of the Federal Agency for Public health and social development, the Khabarovsk regional center of mental health, Tomsk scientific research institute of balneology and physiotherapy of the Federal Agency for Public health and social development.