COMPUTER - CONTROLLED COMPLEX

FOR DIAGNOSING AND TREATING

AUTONOMIC NERVE DISORDERS

"POINTS"

USER MANUAL

"POINTS" complex is

professional working place

for Medical Doctors

PARACELS ® MEDICAL PROJECT (1991)

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1. GENERAL INFORMATION

This manual is an instruction for users, which have little knowledge of the computer that is why its information is quite detailed. The purpose of the authors is to make working with "POINTS" complex as easy as possible for all users regardless of their competence. If you fulfil all the described commands in an accurate step-by-step way, you can operate the "POINTS" complex on your own.

The rules for operating the "POINTS" complex are also to be found in the file "help" which can be run automatically if you click <**Info**> on the upper board of the screen (fig. 1.4). To receive information about the current procedure of your operation you may also press <F1> key on the keyboard.

ATTENTION! In any case it is required to press the key on the monitor display, or to click on the key with the mouse, or to engage the key on the screen, it means you are **to move the mouse arrow on the display to the picture of the necessary key and to press the left key of the mouse!!!**

1.1 INTRODUCTION INTO SEGMENTARY NEUROFUNCTIONAL DIAGNOSTICS

The functioning of the PC-controlled complex "POINTS" is based on the method of the **Sectional Neuro-Functional Diagnostics (SNFD)** which was developed and patented by I.V. Boitsov, MD, (Republic of Belarus).

The SNFD method consists in assessing the degree of vegetative regulation of the inner organs on the basis of changing activities of the spinal innervation neurones as a response to a light stimulation of the skin integument by a standard electrical impulse.

In other words, while interpreting the obtained values, the vegetative regulation of the skin in the area of certain dermatomes is being related to the vegetative regulation of the inner organs. The spinal innervation at any level comprises the interacting constituents of the whole neurone apparatus of a certain section of the spinal cord, such as neurones of the grey substance of the spinal marrow as well as neurones of the paravertebral, prevertebral and spinal ganglia which were isolated into knots in the process of embryogenesis.

FUNCTIONAL SYSTEM
(Scheme of constituents)

SPLANKHNOTOM:
inner organ

DERMATOM:
part of the skin
integument

MYOTOM+SCLEROTOM
muscles. ligaments.
tendons. vessels,
periosteum

NEUROTOM:
sectional neurone apparatus
of the spinal cord (spinal neurones,
neurones of the peripheric knots.
conducting tracts. nervous trunks)
which regulate the functional system
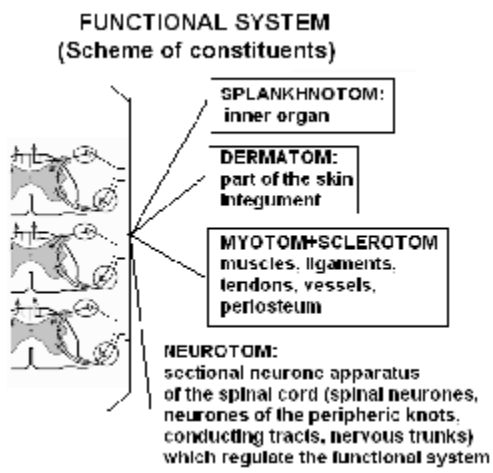
In the process of embryogenesis all constituents of a functional system turned out to be interrelated because of their common initial innervation which persists in case of displacement of organs and tissues due to simultaneous growth of nerve conductors.

In case of any pathology of a functional system all its constituents have to suffer. In the context of contemporary neurophysiology the integrating onset for these constituents lies in the neuron apparatus of the spinal cord (fig. 1.1) where the neurones of certain sections (which are called a "neurotom") rule the corresponding inner organ of the functional system (called a "splankhotom") as well as the dermatom (which represents this functional system on the skin) and the myotom and sclerotom (which are the corresponding muscles with ligaments and tendons), whereas the neurone processes, being components of

Fig. 1.1. Main constituents of a functional system

the nervous trunks and conduction tracts, provide for the integrity of the whole functional system and its interrelations to other systems.

The diagnostic investigation can be schematically represented in the following way (fig. 1.2):

Step I. By means of an active electrode placed on the skin nervous receptors in the skin and the subcutaneous fat are irritated by an irritant of standard strength (the advantages of electric current as a stimulus result from easy standardisation of its parameters such as voltage, current strength, time and area of exposure what determines the necessary power and standardisation of the testing signal).

Step II. As a result of the stimulus a local depolarisation potential arises in the end receptors.

Step III. Under the influence of the sufficient stimulus power the depolarisation potential reaches its critical level and rearranges itself into a nervous impulse which is conducted to the neurones by the afferent fibres.

Step IV. The activity of the neurone apparatus in the corresponding sectors of the spinal cord changes and the character of theses variations depends on the functional state of the neurones before the impulse

Step V. The response of the neurone apparatus to the stimulus conducted by the efferent fibres changes the vegetative regulation of the skin under the active electrode.

Step VI. Resulting from this the electrophysiological properties of this skin area, in particular its electrical resistance, may vary.

Step VII. The value of the skin electroconductivity under the active electrode is being constantly measured by the investigator in the process of testing (current strength is inversely related to electrical conductivity). After the representative areas of all the dermatoms have been tested, the results are interpreted taken into account the normal responsiveness of the neurone apparatus in the various sections of the spinal cord.
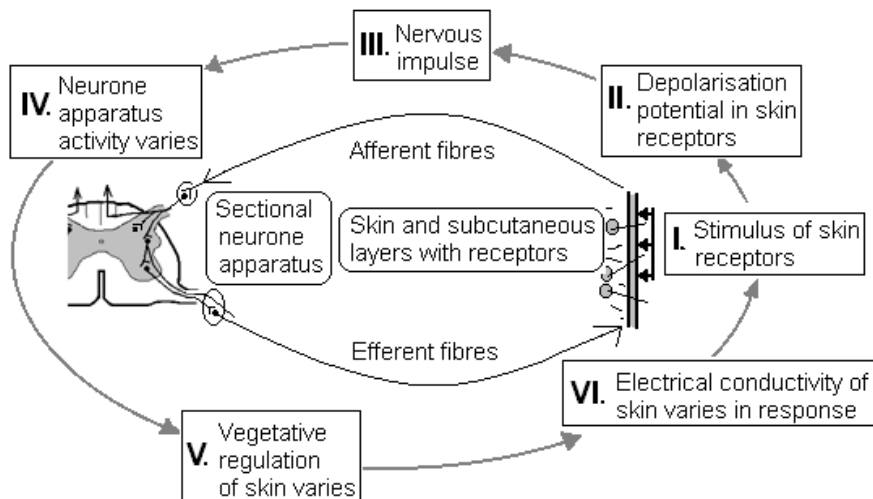
Fig.1.2 Scheme of Sectional Neuro-Functional Diagnostics

The complex "POINTS" provides you with ability to investigate all the phases of the neurone apparatus response. But since the process of the neurone apparatus stimulation before reaching its plateau level takes from 10 to 50 seconds and the process of inhibition takes 5 -10 minutes you may benefit from three variants of the Sectional Neuro - Functional Diagnostics.

Variant I consists in assessing the changes of electrophysiological properties of the skin (i.e. electroconductivity in our case) after the skin has been shortly and lightly stimulated (the testing current lasts for 3 seconds). This test is diagnostics by '**ryodoraku'** or method by Y.Nakatani. In this case the results of testing allow us to assess the localisation of a pathological process in the organism without defining how deep the neurone apparatus is affected. In this variant the time necessary for testing of all representative areas is about 3 minutes
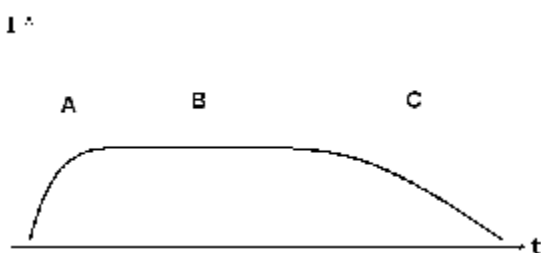
In the process of computer testing the nerve endings of the skin are stimulated and the variations in the strength of the current flowing through the active electrode are constantly recorded. In the process of testing the current strength is constantly increasing until it reaches a certain level which is its stimulation phase (fig. A), then it remains stable for a while (a plateau phase - fig. B). If the stimulus of the nerve endings persists further, the strength of current will decrease (an inhibition phase - fig. C).

Variant II consists in assessing the current strength alterations in the process of the neurone apparatus stimulation up to the plateau phase. This test is Dynamic Sectional Diagnostics (**DSD-test**) or method by I.Boitsov. In this case we define not only the localisation of a pathology but also the degree of the neurone apparatus affection and in some cases even a hidden pathology which cannot be found by means of a light stimulus. In this variant the time necessary for testing of all representative areas is about 15 minutes

Variant III (**DSD-test**) includes the investigation of the stimulation and inhibition phases of the neurone apparatus what may be necessary for conducting special research studies. In this variant the time necessary for testing of all representative areas is about 1,5 - 2 hours.

When the testing for localisation of a pathological process, i.e. pathologically altered functional systems, is finished for each sectional level, the qualitative and quantitative indices of the skin electroconductivity variations caused by the stimulus influence are assessed.

The quantitative index characterises the amplitude of the current strength variations, i.e. the strength under which the plateau phase occurs. Under the influence of the testing current the skin electroconductivity index of a

healthy person must reach certain values and these values for various dermatoms must correlate according to certain factors.
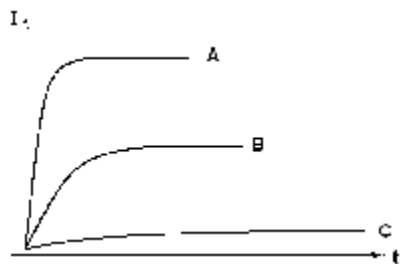
The qualitative index characterises the variations in the current strength in the course of the testing time. The diagram of these variations is being shown on the screen for each dermatom in the process of its testing. This figure shows the diagrams for

B - normal response of the neurone apparatus
A - response of the stimulated neurone apparatus
C - response of the inhibited neurone apparatus

All stages of interpretation are automatically fulfilled by the software of the "POINTS" complex and their results may be shown in diagram, text or phantom variants.

1.2   " POINTS" software - Rules of Installation

You must have the installation of 'POINTS' program in CD-disk or from our site (www.avicenna.vitebsk.net).

Insert a **CD** with installation of the **"POINTS"** software into the CD-disc driver.

1. Connect your device to any USB-port or to COM-port for old devices (if you have not this device, so POINTS will work in DEMO-version only). Your computer has found your device and ask to copy drivers for it. Install these drivers from CD-disk (the first and the second driver).

2. Then start the *setup.exe*.

3. Perform the commands that the installation program asks for it. If you are a novice user, it is sufficient to the extent necessary to click the mouse on the screen by button <OK> or <Next>.

4. After the installation the DSD-folder will become in your computer. There is the «DSD» label on the desktop of your computer.

Now, proceed to the first starting the "POINTS" software.

1.3   Initial Start of   "POINTS" software

   1. Before an initial start of the programme (and in case any further start when you suppose to use the device) it is desirable to have the device already connected to your computer and device's electrodes should be opened !!!.

ATTENTION! The connection of the device to the computer must be done only when the computer is switched off the mains. Choose the USB-port or COM-port for connection of your device. "POST-12" device is connected to COM-port (if your Laptop hasn't COM-port, so you can use a standard adapter PCMCIA-RS232). The PERESVET, RADIUS and BIODAR-V devices is connected to USB-port on the **back** of the computer. These devices have USB-RS232 adapter in it's schemes. These devices can operate on additionally installed ports COM-1 to COM-9. For devices operation at a considerable distance from the computer use a standard extension cable (it isn't more 3 meters). In addition, if you're working on a Laptop, select the USB port with a stable voltage or use the optional standard power supply USB-port.

   2. Make sure that the **licensed CD** with the installation programme **remains in the CD-driver** after the programme is installed

   3. Select the file *"AppStart.exe"* in the folder **"DSD"** *(you may place the file label onto the desktop of your computer to make the start of the programme more convenient)*. To start the programme you need at least 256 screen colours. The best screen parameters are **True Colour (32 bits) and screen dimensions more than 800x600.**

   4. While starting the programme always checks if the device is connected to your computer, so be patient to wait for a while.

   5. After opening the programme will work in language of your WINDOWS. To change for a national language (Russian, German, Spanish, Turkish, Latish, Polish) select **"Service—Options—05.Customizations...—Used language".** A list of service programmes appears on the display where you should select" Service".
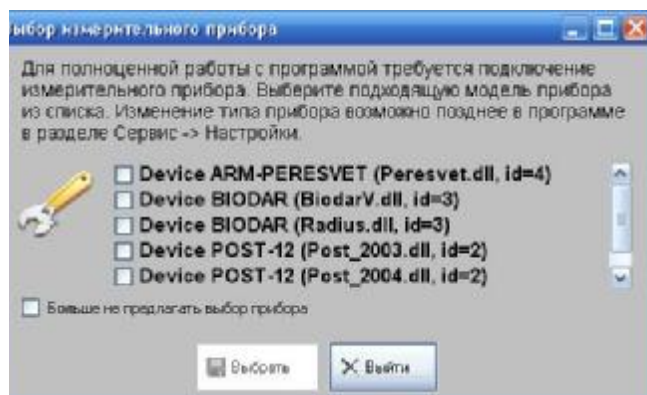
Only during the first starting on the screen, this window appears, where you must specify the name of your device and press <Select>.

Notice! At this stage, be careful who has a POST-12 device. First look at the folder of the old POINTS version - what is year of driver file for your device (driver.dll). And now select this driver. If necessary, you can always change the device driver should be in the **"Service—Options—07.Device–Driver"** (see instructions in the relevant section of this Manual).

A special picture will appear during a starting of program. Notice! number of days to be present at this picture, the program will be active during these days if you have temporary permission to work.

Then this picture will be absent and The First Program's Picture will appear on the screen. There is a yellow star in Europe card on the screen. This star shows the Minsk city in Republic of Belarus. If you place the mouse to this star, so Minsk's coordinates will display. If you don't want that The First Program's Picture to appear when you start the program, put the mark in the lower square. In this case, during the starting of the program window will appear for the test.

The main buttons for program control are always present on the left of the screen. The short description of functionalities of each bookmark is given below:

1) "Test" – registration of a patient and testing him;

2) "Charts" – view test results in the form of diagrams, histograms, colourgram, tables, here is a histogram of emotional background;

3) "Diagnosis" – view test results as a text conclusion, view the list of expected patient's parasites, the calculation of BMI (body mass index), viewing the results of testing autonomic tone of the patient (the balance of sympathetic and parasympathetic divisions of ANS);

4) "Phantom" – view a result of testing in form of 2D and 3D-phantoms;

5) "Puncture" – view recommended points recipe for puncture of current patient, making electropuncture, view atlases of acupuncture points, view various reference materials for acupuncture, view recommended points for the treatment of many pathological states of the organism, the calculation of an open point, the hardware search points, recipes of puncture for the most common pathologies (nosology);

6) "Phyto" – phytoremedy choice for treatment of patient's pathology on the basis of Oriental Medicine

7) "Massage" – recipes for oriental massage for the current patient presented at the phantoms of the head (cosmetic massage for skin and for facial muscles) and the phantoms of the extremities (medical massage)

8) "Models" – construction of graphical models for a group of patients and comparison of models from the archive with charts of patients;

9) "Service" – settings for the program (e.g., language, transcription of meridians, musical accompaniment, etc.), maintenance of archives with the ability to copy it to other media, with the possibility of connecting other archives, and here you can view information about the developer of the «POINTS" complex.

Buttons of the following bookmarks are located on the upper edge of any of the windows:

1) "Web" – view of the developer's site, automatic updates via the Internet;

2) "License" – getting codes for the registration of program on your computer;

3) "Help" – view reference material at the time of working with any functional unit of the program;

4) "Print" – pressing this button the program will ask permission to print the current information .

There are the name of our diagnostic's method, name of current patient, date and time of current testing at the very top of the program. This patient is active for work with him in current time.

There is archive's list of your patients on the left of the screen. We consider the rules of the archive separately in the relevant section of this Manual.

1.4   Registration of POINTS Programme User

While starting the programme for the first time, you may have paid attention to the warning that without registration it will be working only for 10 days. In this period you must register the programme. Arrange the time of your registration by calling the phone numbers**+(375-29)-7713446; +(375-29)-3993446** or sending an E-mail message to: **avicenna_h1@mail.ru ; avicenna_h1@tut.by .** In case of changing phone numbers or the E-mail address refer to the Internet site **www.avicenna.vitebsk.net;** in case of changing the site refer to a search server using the key words **"Igor V. BOITSOV".**

To begin with registration after starting the programme click <License> on the upper/main board. A window **"Licensing"** will be displayed where you see a lines: "Code of entry", "Computer's number", "Code of activation", "Number of activation", "Password". There are lines with names of the functionality of the complex on the left of this window. Here the 'ticks' marked those program's functionalities that are authorized for this computer.

Licensing - a way to permit to use the program with the desired functionality.

Licensing of two ways:

1). **By phone or SMS-message**: you call and tell the developer "Code of entry" and "Computer's number". The developer tells you the "Code of activation" and "Activation's number". You enter your name (your name must be at least 8 characters) and the received data and click <License>. Program will be active with the desired functionality.
2). **By Internet** (before registration, make sure Internet connection). It takes place in two stages: *Step 1.* Registration of applications for licensing. Enter your name and click <License>. Your request will be posted on the site of developer what you will be notified in a message on the screen. Please notify the developer of your application by sending a letter or SMS. Your applications will be processed. *Step 2.* Licensing of program. After receiving notification from the developer, click <License>. Program will be active with the desired functionality.

ATTENTION! Every time you open the window "Licensing", the **"Code of entry"** changes, that is why you should sign "Code of activation" and "Number of activation" - codes provided over the phone into the corresponding lines while staying in the window "Licence".
ATTENTION! After receiving the licence for programme operation, copy the file "*vitebsk.lf*" from the "POINTS" - folder onto a disketta since it remains for ever your licence for "POINTS" programme operation. If for any reason you have to re-install the "POINTS" programme on the same computer, it will be sufficient to change the file of the same name in the "POINTS" folder of a newly installed programme by the file from your this diskette. So you can automatically obtain a licence for operating our programme on this computer. A re-installation of the program should be done to new folder.

1.5   Installing a Password for Programme Entry

After installing a password, a window will appear by every programme entry where you should sign in your password. After typing the last sign of your password, press **<ENTER>** and if the password is right, the programme will be downloaded, in the opposite case, the programme downloading will not take place.

To install a password you should fulfil the following:

1) Click **<License>** to open the window "Licensing";
2) Click on the blank space on the line " **Password**";
3) Enter a password of numbers and letters - not more than 10 signs (Be careful! A capital and a small letter mean different signs, the same refers to English and National letters);
4) Click on the key **<Licensing>.** Now you can enter the programme only using your password.
The password is removed in the same manner as it has been installed. In this case the numbers and letters are not signed in but deleted. After removing the password the entrance to the programme becomes free.

2. TESTING

2.1 Rules for Testing

Since the testing aims not only at an initial diagnostics of functional disturbances in the organism but also at *the control of a conducted therapy option or of functional changes in organs and systems taking place in the organism under certain influences* (professional harms, physical and emotional loads, different toxins) as well as at other problems, this section deals only with **rules for conducting the testing itself** while *the conditions for conducting the testing aimed at* **an initial diagnostics** *of functional disturbances in the organism* are additionally discussed in the following Chapter 3 (P.3.1) .

Rule 1. Since static electricity can appear on the patient's skin, the persons engaged in testing should wear cotton clothes (it refers to the patient as well as to the doctor).

Rule 2. It is recommended not to allow anybody to enter the room where you conduct the testing.

Rule 3. The room must be dry (air humidity ~ 70-80%), the room temperature must make up ~ 23°C. If it is cold in the room (< 20°C), the blood vessels on the skin surface will constrict and the indications will be lower.

Rule 4. The distance between the patient and the monitor with the main computer unit must be not less than 1 m.

Rule 5. Before the registration begins, the patient must take off his or her watch and all kinds of bracelets from hands and legs, putt off his or her shoes, socks (stockings, tights) in order to restore the blood circulation of the skin areas to be tested (it is not necessary to take off jewellery such as rings, chains, and ear-rings).

Rule 6. The patient must empty the bladder and rectum before the testing starts

Rule 7. The point to be tested must not be pressed, rubbed or frequently touched in order not to irritate the skin nerve endings in which case the indications will be higher.

Rule 8. The active electrode must be placed as exact as possible on the area of the point to be tested; there must be no moles, scars or rushes in the area of testing. 10 minuets before the testing starts, the corresponding points must be cleaned with the ethyl alcohol solution (70°), as many patients use creams or ointments whose fat reduces the testing signal (simple washing with soap does not remove fat from the skin pores!)

Rule 9. The person conducting the test must not touch the skin surface of the patient

Watches and bracelets on her arms and legs will not stop you during testing of paravertebral zones.

NB!!! If you want to change the zone of testing, it performed before entering the window "Test" in the *"Service—Options—05.Customizations…--The Zone of testing" bookmark*. Before registering a patient you should decide which representative areas you will use: distal parts of the extremities or paravertebral areas. In case of distal parts of the extremities there must be *"1/1-Distal zone # 1" line* in the *"Service—Options—05.Customizations…--The Zone of testing" bookmark*. If you use paravertebral areas there must be *"7/2-thorax vertebra" line* or *"8/2-Cerv.-Lumb. Vertebra" line* in this bookmark.

2.2 Patient's Registration (General Information)

To begin the testing procedure, so activate *"Test--Testing" bookmark*, if it has not been activated earlier.

Before conducting the test you should register your patient. The registered data will be stored in the database until you delete it.

Before registering a patient you should chose which variant of diagnostics you will apply: the 1st or the 2nd one. If you choose the 1st variant (the short test by Nakatani), so activate the *"3-circle" (fig. 2.1)*. For the 2nd variant (DSD-test) you should activate the "60-circle" *(fig. 2.1)*. The necessary test will be activated automatically during start of program if you pre-activate the corresponding line in the *"Service—Options—06.Parameters of testing—Duration of testing, sec" bookmark* and save your settings.

If you use a paravertebral zones it is necessary to activate the "60-circle" only.

In addition, you have the opportunity to establish a lower voltage of testing current. For it activate the "6-circle". Such low voltage will be appropriate only for children under 5 years or for patients with high activity of the sympathetic skin-response reactions (values in almost all zones are above the threshold of 130-140 mkA). If you are constantly working with such children's groups, then the *"Service—Options—06.Parameters of testing—Voltage, volt" bookmark* can supply 6V, while always when you open the *"Test-Testing" bookmark, so* testing current will be calibrated at 6 volts automatically.

Do not forget after every change in settings to press the button <Save> in down line of "Option" window.
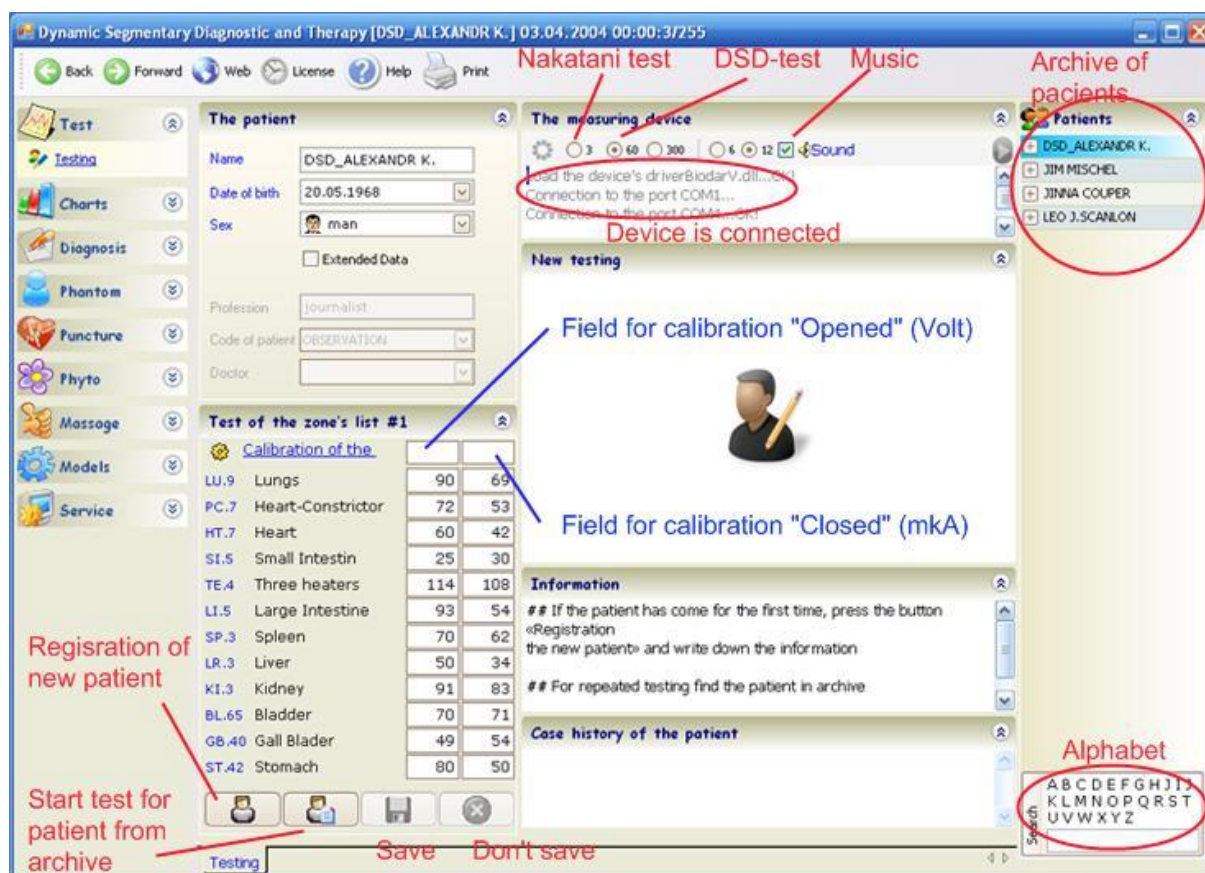
Fig. 2.1

If the program has identified your device as connected, then it is ready for testing. Tightly-lete for a cup of the active electrode with cotton, richly moistened with saline (0,9% NaCl). Wipe dry active electrode, otherwise your testing on the current wet grip electrode goes to your hand. Before registering let the patient take off their shoes and socks, watches, bracelets, and undress for testing of spinal nerves (if the patient poorly reviewed the neural processes in the tested region of the spine, then the pre-locate its by palpation and mark its by the marker). Ask the patient and, especially women: "Do they used the cream or ointment on the hands and feet during the 3 days prior to testing?". If YES!, Then wipe the area for testing by 70° medical alcohol and start the test only after 10-15 minutes after this "massage".

As you noticed, the list of areas of testing indicated distal zone or paravertebral (thoracic or cervical-lumbar). Check out this list and if it is necessary, change it in the *"Service—Options—05.Customizations…--The Zone of testing" bookmark*.

Decide whether you need music background during a long test, if not, disable it (uncheck the square «Sound»). Turn off the music you can during the test between the measurements. In addition, if it always bothers you, then you can disable the automatic musical accompaniment in the *"Service—Options—07.The device—Musical accompaniment" bookmark* (to turn off the supply line in front of the team <False>, and vice versa if you want to activate it command <True>). You can also select a file of musical accompaniment in the corresponding line. In addition, if you pre-copy your favourite music files in *.mp3 to DSD\SOUNDS directory, then you can use it during a long DSD-test.

Thus, before a test, you must register the patient. This made the data will be stored in the archive until you delete its.

2.2.1 Patient's Registration from Achieve

Let us discuss the case of patient's registration when this patient visited you earlier and was already registered as a new patient. You will see the list of patients from your archive at the right of window. So you should click on the necessary **<Name>** in the list.

If the list is so long that you cannot see the necessary name, press the key with the first letter of the name on your keyboard or in the alphabet under the list. The cursor will automatically move to the first name of the list, which begins with this letter. Now you can find the necessary name and click it. You may also move the cursor down to the necessary name using the key ¯ on your keyboard**.**

As it takes place, the registration card will be filled in with the patient's data. To begin with measuring, click on the **<To begin new testing>** key (fig. 2.1). The cursor will further move to the operation mode of the device adjustment, if the device is connected to your computer, if not so, it will move to the stage of recording the indications into the corresponding table (see P.2.5).

2.2.2 How To Register a New Patient

If you register a new patient, press the key **<Registration the new patient>** (fig. 2.1).

The registration's lines are clear now and the cursor stands on the upper line where you are to write down the **name** of the patient.

You may put aside your mouse since all operations on registering and testing the patients can be done automatically or with the help of the keyboard until you need to display graphical representations of the measured values.

Fulfil the following steps:

1) Type on the keyboard the last and/or the first name of the patient. After typing the last sign press **<ENTER>.** All letters will automatically become CAPITALS;

2) The cursor will automatically move to the "Date of birth" line. Type the day, month and year of the patient's birth date. After typing the last sign press **<ENTER>.**

While typing the date of birth do not put any punctuation signs between the day, month and year of the patient's date of birth. The day must be typed with two figures - from 01 till 31, the month number must be typed with two figures too - from 01 till 12, and the year must be typed with four figures, e.g. 1951 or 2001.

3) Now you see a table with words "man" If your patient is a man, press **<ENTER>** at once, if it is a woman, press the key ¯ on your keyboard moving your cursor to the word "woman" and then press **<ENTER>.** You will move to the stage of adjusting your device. In this case the registration is over and steps 4, 5, 6, 7 need not be fulfilled. In case of a full registration option the cursor will move to the line "**Profession**" and you will continue the registration.

4) Type on the keyboard the patient's profession (here you may type any necessary information about the patient instead that about his profession) and after typing the last sign press **<ENTER>.**

5) Now you are on the "Code of patient" line. Type the necessary code on the keyboard. After typing the last sign of the code press **<ENTER>.** If the code is not necessary, you may omit this line by pressing **<ENTER>.**

On this stage of the registration you may not type the patient's code on the keyboard but choose it from the "Table of Codes" if it was created earlier. To open the table of codes you must click by your mouse on the triangle opposite the "Code of patient" line. Then you should click by the mouse on the line with the decipherment of a necessary code and the code will be registered automatically. Press **<ENTER>** and the cursor will remove to the list of doctors names.

6) Now the cursor moves to the "**Doctor**" line. It is placed on the first line of a previously made list of doctors' names. Now you are to leave the cursor on the first name on the list. If it is your name press **<ENTER>**. If you want to change doctor's name open the doctor's list - click by your mouse on the triangle opposite the "Doctor" line. The doctor's list will be opened and click to your name. If doctor's list has not your name write it or rename other name and press **<ENTER>.**

7) You will move to the stage of adjusting your device.

2.3   Calibration of the Device

Before adjusting your device clean the cylinder of its passive electrode with ethyl alcohol solution (70°) and place a firm piece of cotton wool thoroughly soaked with 0,9% solution of NaCl into the ebonite cup of the active electrode.

Be careful! Keep clean the metal contact inside of the ebonite cup of the active electrode, remove salts from sweat glands from it (looks like a black film), which accumulates on the contact during the testing. At the end of the working day clean the contact with ethyl alcohol solution (70°).

The adjusting itself consists of two stages:
Stage 1 automatic adjustment of the testing current for 6 or 12V-voltage
(**"Open"** adjustment - Stage 1)
and
Stage 2 adjustment of the testing current strength about 200 μA
(**"Closed"** adjustment - Stage 2)

STAGE 1
The registration completed, the cursor automatically moves onto the line "Calibration" of the table for measurements (fig. 2.1).

So when the cursor is on the *"Calibration" line – "Open" field* you may begin with the adjustment of **the testing signal voltage** (in the help "Calibration" window on the right you will see a picture of opened electrodes and an instruction). Take a passive and an active electrode in your hands (as it takes place the electrodes must not touch each other) and close its short time (1 sec). The adjustment of the testing current voltage will be done automatically

(the sign **"6V"** or **"12V"** will appear in the *"Calibration" line – "Open" field* and the cursor will automatically move onto the *"Close" field*.

In the information window you will see the rules of the second stage of the adjustment #2 "Close" and a picture of closed electrodes.

STAGE 2. So when the cursor on the *"Calibration" line* stays on the *"***Close***" field* you may start with the adjustment #2 of the **testing current strength** (in the help window on the right you will see a picture of closed electrodes). Connect an active and a passive electrodes with each other through the wet cotton wool in the cup of the active electrode and wait about 1-5 sec.

Keep the electrodes connected in such a way until 200 mkA appears on the *"***Close***" field* and audio-signal will be which means that the adjustment "Close" is completed. Open the electrodes and the cursor automatically runs onto the filed for recording the indications of the representative point - the right point of the lungs. As it takes place, a picture of P. 9 - point on the hand will appear in the help window on the right. If your computer is equipped with speakers you will hear an interrupted signal.

If you work with the DIAGNOSTIC MODULE POST-12.2 you might need the adjustment of the alternating resistance on the active electrode (such adjustment is usually necessary only at the very beginning of your work on a certain computer). The *"***Close***" field* of the *"Calibration" line* will indicate the strength of the current going though the electrodes (less or more than 200 mkA) and the audio-signal will not be. Now you should adjust the current strength (the electrodes remain closed!) to 200µA using the handle on the active electrode and after that (**the electrodes remain closed!**) 200 mkA appears on the *"***Close***" field* and audio-signal will be which means that the adjustment "Close" is completed. Opened electrodes and the cursor moves onto the field for recording the first testing point indications (the right point of the lungs). So the second stage of the adjustment is over and you may start the testing.

2.4   Testing

After completing the adjustment "Closed" the cursor automatically moves onto the field for recording the indications of the representative point - the right point of the lungs Lu .9 (or first paravertebral zone). This field becomes active and there is a twinkling cursor in it (fig. 2.2).

So the device is ready for testing, i.e. for feeding the active electrode with the testing current and for the following recording of indications.
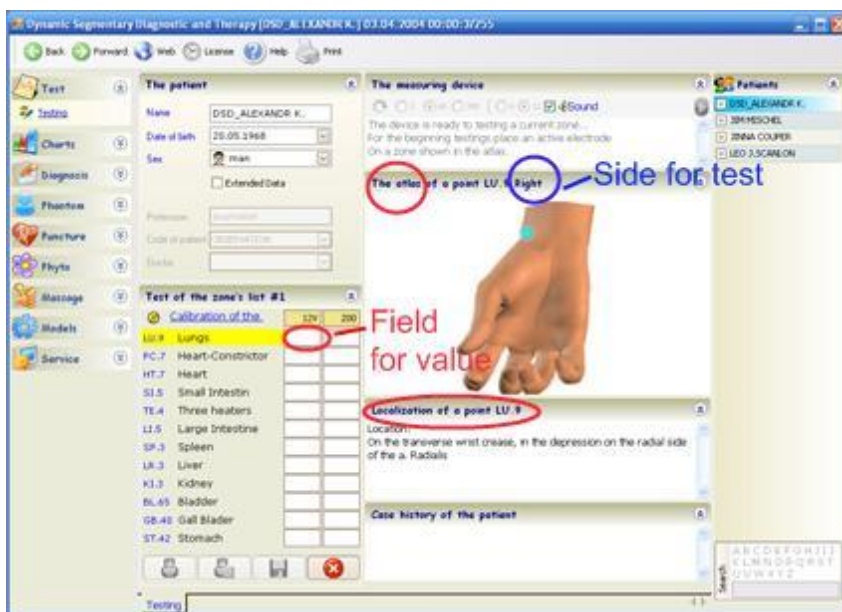
Fig. 2.2

The patient takes the ***passive electrode*** (which looks like a cylinder) into his right hand and keeps it so during the whole procedure of 24 points testing (Fig.). To provide a better contact with the patient's skin put 2-3 drops of isotonic NaCl-solution (0,9%) onto his right hand.

The ***active electrode*** is to be placed on the representative right point of the lungs (the atlas representation of the point and the information about its localisation are displayed down on the right in the corresponding windows of the display).

Attention! If you work with the diagnostic module, do not move the active electrode around the point but place it onto the point at once. In other case the cotton wool fibres in the electrode cup may touch the skin and give an untimely command " Begin testing".

Keep the active electrode on the point pressing it with a medium effort (about 50N). The testing will begin immediately after you put the active electrode onto the skin. Do not remove the active electrode from the skin while the testing of the area is going on. The indications will be read automatically and the computer will give you a sound signal (its power depends on the power of your outer speakers or in case they are absent, on the power of the inner speaker of your computer). Together with the sound signal the value of the current strength (in µA) for the point you are testing will be written on the active field for recording of indications.

The field will become yellow and the cursor will automatically move onto a new field for recording the indications from another point (now it will be the left representative point of the lungs). The following operations are similar for testing all 24 points.

If you diagnose according to the first variant, each representative area is being tested within 3 seconds (Nakatani test). If you test according to the second variant (DSD-test), during the testing process a diagram of skin conductivity variations for each area is being built in the window with the atlas of this area and the testing time depends on the time necessary for achieving the maximum activity of the corresponding neuron apparatus.

Remember! The cursor will move from field to field in the recording table automatically in a certain sequence. The sequence of points is indicated in the table of indications recordings. Besides we are to test the right point of the functional system first and only then the symmetrical left one. You must obligatory follow the sequence of testing points. If the sequence was broken and the indication was recorded onto the wrong field, you must click your mouse on the necessary filed in the table of records. In this way you activate this filed and may write down the tested value of the current strength from the keyboard. Then you must move the cursor onto the field of the next point to be tested and continue the testing procedure.

Attention! If there is a value of the current strength in field already, it will automatically be erased while writing down a new indication.

After the last 24th point *(the left point of the stomach)* is tested, the cursor will automatically move to the sign <To save in archive> (fig. 2.1).

NB!!! Since the very beginning of the test all keys on the display are locked except "Sound" and **<**To refuse preservation**>** (figs. 2.1, 2.2).
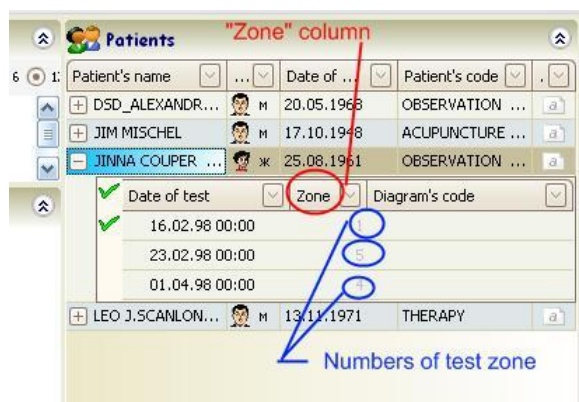
To activate the key <To save in archive> (all measured values will be immediately stored into the archive} you may momentarily close the passive and active electrodes (or simply touch the patient's skin with the active electrode while he is still holding the passive electrode in his hand). The programme will automatically save the current measurements in the archive and will switch to an automatic looking-through of its "Levels histograms". These histograms are one of the programme options for graphic representation of the testing results.

Special code (zone number testing) is assigned to all the diagrams of testing conducted during the preservation of test results in the archive. You can see this code in the column "Zone" if you pre-activated the patient's name in the list of archival patients.

Attention! If it is necessary to repeat the measurement of some area (e.g. you may doubt that you acted properly during its initial testing), you should remember that you may do it only after the initial condition of this skin area is restored after the testing signal of the previous measurement. It takes not less than 3 minutes. That is why we

recommend to repeat all measurements at the end of the testing procedure before you press the key <To save..>. Move the cursor in the table of recordings onto the field of the necessary point, test it and move the cursor on the key <To save..>. Then you can activate the key by a double clicking of the left mouse key.

Attention! If for some reasons you failed to test a point or some points in the process of automatic testing (there is "0", or "200 mkA" or "empty" in the field for indication recordings), the programme will make you test these points again at the stage of switching to the "Levels histograms". A window with the corresponding message will appear, in which you are to click your mouse on the key "OK". The cursor will automatically move into the table of indication recordings on the field of the first point, which you failed to test. You must put the passive electrode into your patient's right hand. The active electrode must be placed on the point in question (be careful, if the cursor stays in the first column, you are to test the right point, if it is in the second - the left one, so as it is shown in the picture). Wait until the testing is over. Then move the cursor onto the field of the next point to be measured anew, and if there are not any click the key <To save in archive>, the testing will automatically end and the the "Levels histograms" will be displayed on the screen.

2.5   How to Enter Data into Table of Indication Recordings from Keyboard

If you have conducted your testing with some other device whose parameters correspond to Y. Nakatani method (200 μA with closed electrodes, voltage - 12 V, the active electrode is negative and represents an ebonite cup with cotton wool soaked with isotonic solution) you can interpret the obtained values of electroconductivity for the representative points with the help of this programme.

For the purpose you must write down on paper all electroconductivity values of the representative points in turn according to the table of the "POINTS" programme.

Register your patient as it was described above. After the sex of the patient is registered (in case of a short registration) or after the doctor's name is selected (in case of a full registration) press **<ENTER>** as usual and only then, in case of the device turned off, the cursor, instead of adjustment, will automatically move onto the field of indication recordings of the right representative point *(the right point of the Lungs "Lu")*. Now you are to enter from the keyboard the indications of electroconductivity of this point (e.g. 52). Then press **<ENTER>** to fix this value in the table. As it takes place the cursor will automatically move onto the filed for indication recordings of the next point (the left point "Lu"). The value of the electroconductivity of the right point "Lu" is now fixed in its field of the table.

In a similar way enter the electroconductivity values for all 24 points strictly following the sequence of the data entry.

If some wrong value has been entered and you must correct it, place the cursor on this table field (by clicking the mouse on the field in question), then enter a new value, press **<ENTER>** to fix it and move the cursor with the mouse or the "**Tab**"- key onto the necessary field.

As soon as all the table for indication recordings is filled in and the last value is entered (the indication of the left point of the stomach "E"), press **<ENTER>** on the keyboard. The cursor will move onto the key <To save..> (fig. 2.2). Press **<ENTER>** on the keyboard once again and you will get to graphic imaging of the results (the "Levels histograms"). All the data you have entered are now saved in the programme archive.

2.6   Viewing Graphical Results of Testing

As it was said above, after the testing of the 24th point is competed, the cursor automatically moves to the sign of the key <To save…>. If you touch the patient's skin while he is still having the passive electrode in his right hand, all indications of the current testing will be stored in the archive, and the programme will automatically switch to the regime of looking through the **"Levels histograms"** of this measurement.

Looking through the "Levels histograms" is one of the functional possibilities of the programme to display graphic results of the conducted testing.

Looking through graphic results of the current patient's testing can be done when the ***"Charts" bookmarks*** will be activated (Fig. 2.3). So when the testing procedure is over and the programme automatically switches to the regime of displaying of the "Levels histograms", it means that the ***"Charts--Levels" bookmarks*** is activated.

As you may have noticed, the values of electroconductivity obtained by testing are represented up on the screen. Besides the following indications are displayed here. If the value is coloured blue, the obtained indication lies below the normal value, if it is coloured red, the indication exceeds the normal value and if it is coloured green, the value lies within the normal range (Fig.2.3).
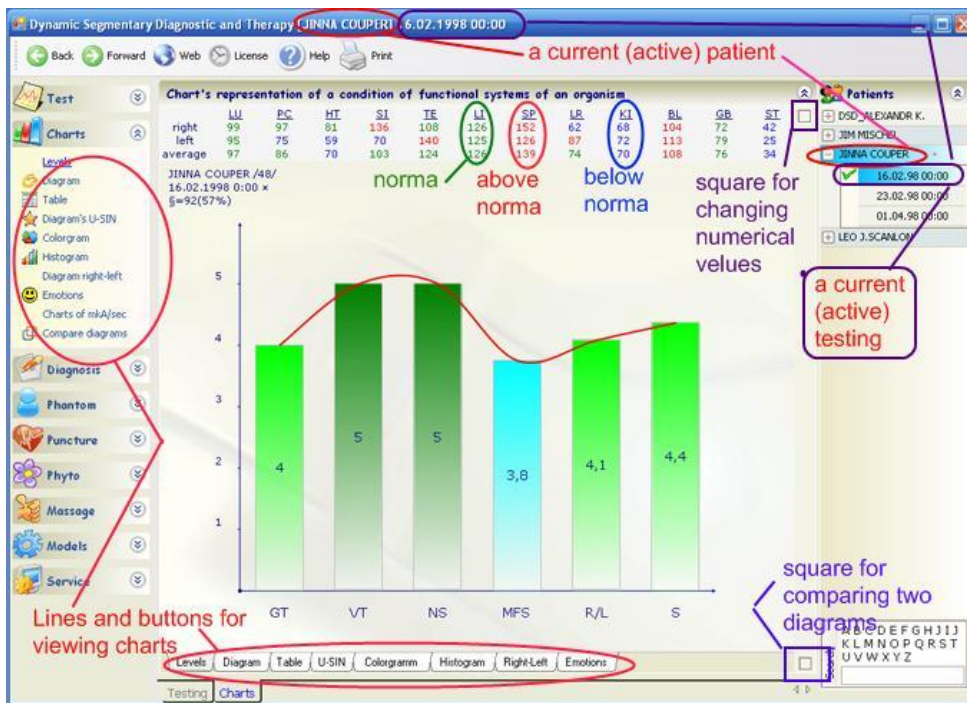
Fig.2.3

There are one-three squares to the right of the lines with the names of systems. If upper square is empty - this means that the numerical values presented in microamperes. If you click on this square, then it will be activated, and the numerical values will be presented in millimetres from the normal line. The sign of the 'negative' means that the indicator below the normal line, and a 'plus' - above this line. If you again click on this square, then it will be a point, and numeric values will be presented in millimetres from the zero line. At the same time during any of the options see the colour of the numbers will speak about how that value was within the normal range – green, below the norm - the blue or above the norm - the red colour. When printing schedules numeric values of indicators are printed exactly in the form, which presents on the screen.

Whenever you activate the archive date and time of testing, conducted by DSD-test, Auto-ski on the screen will be displayed two graphics in the comparison (under each other) - on top of the code "3" near the yellow dial, and below with the code "255' (fig. 2.3). Code "3" 'says' that this schedule is a reflection of the state response skin-sympathetic reactions to the third second of the test, and the code "255" is assigned to the schedule with maximum values of current intensity, i.e. at the stage of entry fee. Further, the feasibility of such a display of charts in comparison will be explained in the section "Decoding of DSD-testing" of this Manual. If you look at the list of patients, the cursor will be on the correct name in these comparative images. If you click on the square with a cross in front of that name - we see that the date of testing is active, to the left of which stands a square with a cross. If you click now on this square, you will see a list of diagrams, encoded per second. This check is standing in front row with the code "+" - this means that this line is active, and encoding "+" is just to view the results of the DSD-test comparing the third and last seconds. If we move the cursor with the string "+" on any other, for example 5, the screen will display schedule is for this fifth second of testing.

When a graphic is displayed on the screen so there is archival data in the upper left corner of the window (Fig.2.4): DSD_ALEXANDR K. - Name of patient / 41 / - the number of full years of this patient; 15.05.2006 19:12 - date and time of testing; * power - the code for this chart, $ = 48 - the average rate of the current strength of all the zones (67%) - the approximate number of indicators, the relevant norm; - yellow dial number seconds of DSD-test (second code "255" always points to the graph reaches a plate, i,e. the maximum values of current strength).

«Histograms of the levels of ANS disturbances »
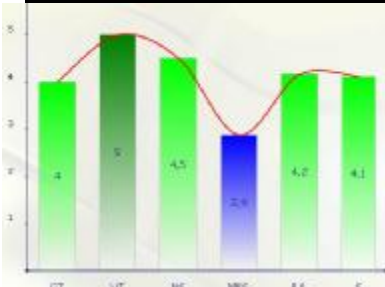
There will be histograms of five indices on the screen where their names will be represented on the X-axis and their values in scores will be represented on the Y- axis. Each of the five indices characterises its own level of disturbances in patient's organism. In an ideal case all the indices have five scores and this is the average level of the health monitoring (the extreme left index **"S"** of the health monitoring also corresponds to five scores).

I. Index of general tonus of the organism (GT). This index characterises the level of disturbances in the following functional systems: higher centres of the vegetative nervous system such as limbic

system, reticular formation, hypothalamus (according to the Chinese medical theory it is the level of disturbances in the flowing of the "Chi" energy through the organism).The index is calculated based on the average value of the electroconductivity of all the 24 areas. On correlation with the corresponding norm scale the score of this index is displayed on the screen and the corresponding diagram is build.

II. **Index of correlation between the activities of the sympathetic and parasympathetic nervous systems (VT)**. This index characterises the following level of the health disturbances: the balance between the parasympathetic and sympathetic parts of the vegetative nervous system (according to the Chinese medical theory it is the level of disturbances between the general "YING" and "YANG" energies). The index is calculated based on the quantitative and qualitative constituents which, taken together, give an impression about the degree of lacking balance between these parts of the vegetative nervous system (VNS). The index of their full balance corresponds to 5 scores. If the activities of any part of the VGN prevail, the degree of this prevalence is assessed from 1 to 4 scores. To define which of the parts prevails you may look through the previous section (button<Totals>). In case of the sympathetic part prevalence you will see "YANG" in the line "Comparison", "YING" in this line will point to the prevalence of the parasympathetic part of the VNS. In the end, on correlation of the qualitative and quantitative indices, the score of the index is displayed on the screen and the corresponding diagram is built.

III. Index of quadrant conductivity (NS), i.e. degree of identical deviation of three similar indices. This index characterises the following level of the health disturbances: the balance between similar indices responsible for the conductivity of the outer and inner surfaces of the right and left extremities (according to the Chinese medical theory it is the level of disturbances between the "YING" and "YANG" energies of the extremities).On correlation with the corresponding norm scales each triad of similar indices receives its own score and in the end an average score is displayed on the screen according to which the corresponding diagram is built**.**

IV. Index of deviation of norm indices (MFS), i.e. the degree of indices deviation from the norm value.

This index characterises the following level of the health disturbances: the balance between separate functional systems. All in all, 12 pairs of areas are investigated which correspond to certain functional systems. On correlation with the corresponding norm scales, each index receives its own score and in the end an average score is displayed on the screen according to which the corresponding diagram is built**.**

V. Index of lateralization (R/L), i.e. the difference between the left and the right indices of symmetric areas. This index characterises the very first level of disturbances of health, i.e. the balance within each of the twelve functional systems. All in all, twelve symmetric areas are investigated, that is why twelve differences are assessed. On correlation with the corresponding scale, each of the twelve differences receives its own score and in the end an average score is displayed on the screen according to which the corresponding diagram is built**.**
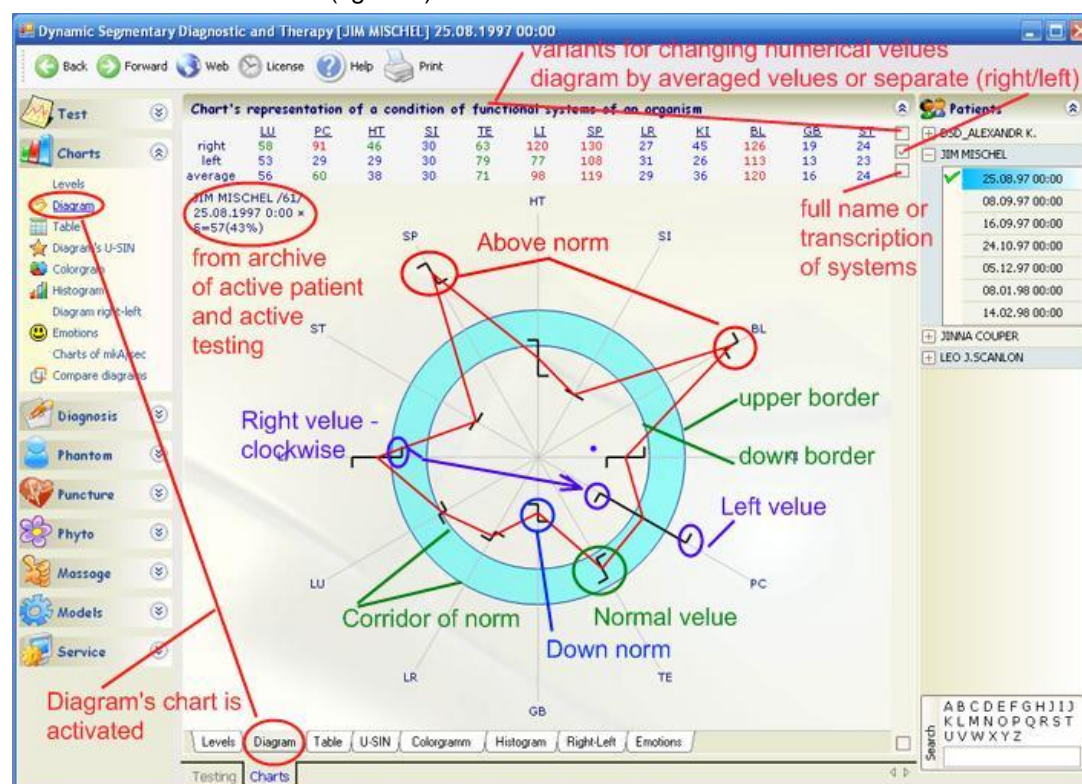
During working with program to view through the "Histograms of the levels of ANS disturbances" click the **<Levels>** line in "Charts" bookmarks (fig. 2.3.).

Fig. 2.5

The following types of graphical display of the status morphofunctional systems is considered, the most convenient of which probably is the "Diagram" (*the "Charts-Diagram" bookmarks*).

Fig. 2.5. shows an __hour-by-hour diagram.__ When you have activated the second square at the right from indications, the letter signs for meridians will change into the meridian's full names. Click to this square once again to cancel this command. When you have activated the down square at the right from indications, two lines will appear on the screen: a blue one is a separate graphical display of the right indications and a red one is a separate graphical display for the left indications. Click to this square once again to cancel this command and to obtain a unified graphical display which line runs trough average values of the right and left indications while the difference between them is marked as dashes on the radial lines.

Percentage (%) of normal indications of a certain measurement (see the upper left corner of the screen) is calculated on the base of electroconductivity indications obtained by testing firstly and secondly of gradations of average value of all tested points (Fig. 2.5).

Similarly, "Diagram right-left" displays. The red line of this diagram is based relatively normal corridor on the values obtained response skin's reactions of each vegetotom. Right figures show the values on the right side and the left - the left.

To look through indications of the meridians condition in the form of "Colorgram" click on the <*Colorgram*> line.

To look through indications of the meridians condition in the form of "*__histograms__*" (with a mm - scale of distance from the zero point according
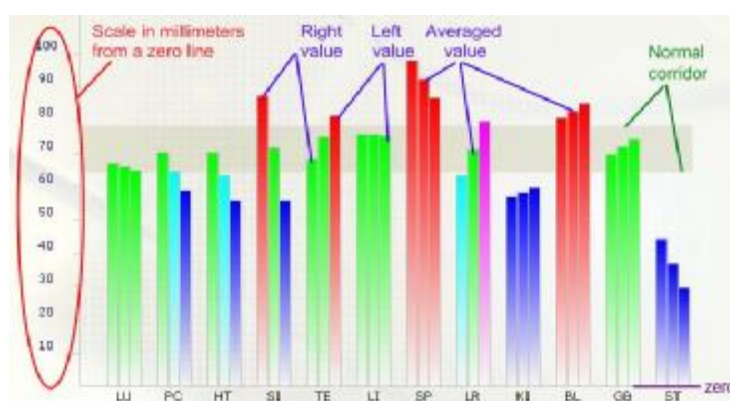
Fig. 2.6

to the data of the standard table) click on the <**Histogram**> line (fig. 2.6.) on the "Charts" bookmarks. If you click on down square at the right of indications, then it will be activated, and the sequence for representation of indications will change: from left to right it will now read 6 Yin meridians (Lu, PC, HT, SP, LR, Ki) and then 6 Yang ones (Si, TE, Li, Bl, GB, ST).

According to the initial setup the sequence is as follows: 6 indications for upper extremities (Lu, PC, HT, Si, TE, Li) and then 6 indications for lower extremities (SP, LR, Ki, Bl, GB, ST).

To look through the standard *__table__* click on the sign **"Table"** on the additional board (fig. 2.7).

To look through *__U-SIN diagrams__* for Yang and Ying meridians, click on the *"Diagram's U-SIN" line.* Left on the screen you will see the diagrams for Yang meridians and right on the screen - those for Yin meridians. The plot runs through the mean values of the meridians. Scaling of the coloured balls according to the dotted line circle shows an excess, insufficiency or norm with regard to a mean value for a certain meridian. If you activated the second circle at the right of diagram, the right values will displayed in Diagram. If you activated the down circle at the right of diagram, the left values will displayed in Diagram. If you activated the upper circle at the right of diagram, the mean values will displayed in Diagram.

Section "Emotional status of man". Emotional status of a person depends on the biological composition of his blood. It can be easily proved by introducing into human blood special preparations which foster the manifestation of this or that human emotion (such as for example, "substance of fear" or "compound of joy"). The biochemical composition of blood is above all influenced by metabolism in a human organism which is nothing else but the result of the common vital activity of organs and systems. Thousands years ago oriental physicians, using the method of observing human behaviour, defined which emotions a human being demonstrates in relation to a pathology of certain inner organs. It should be also noted that metabolism in the state of rest and metabolism in a stress situation may differ to a great extend, that is why this program demonstrates its diagrams of emotional status separately for each emotion in the state rest and in a stress condition and the emotional state in these cases can be different. The most manifested emotion of a patient is the one which name is placed opposite the four upward red columns. The inhibited emotion is the one which diagram demonstrates four downward blue columns. But most often there are no simple situations on the emotional background of a person that is why the diagrams of emotions can be rather complicated. A person in a stress situation may behave so that there will be red columns opposite two different emotions in his diagram of the stress condition.

Chart's representation of a condition of functional systems of an organism

	LU	PC	HT	SI	TE	LI	SP	LR	KI	BL	GB	ST
right	99	97	81	136	108	126	152	62	68	104	72	42
left	95	75	59	70	140	125	126	87	72	113	79	25
average	97	86	70	103	124	126	139	74	70	108	76	34
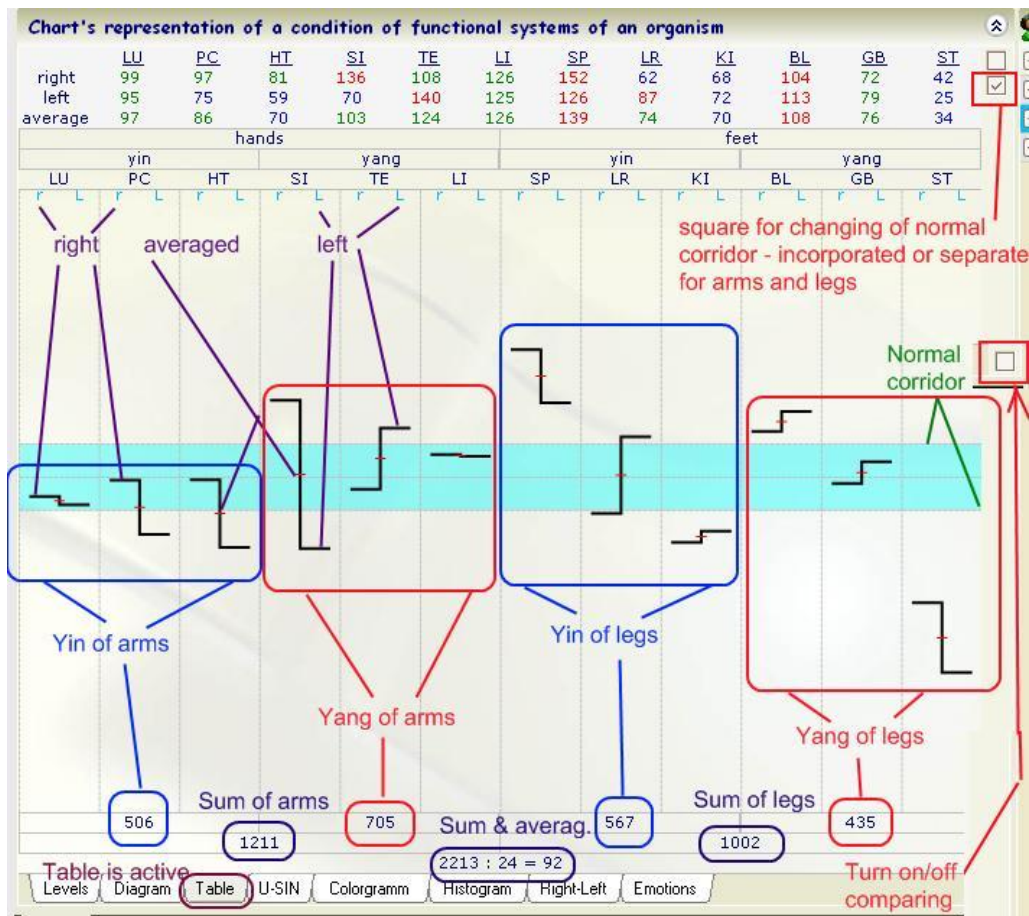
Fig. 2.7

To look through ***graphical displays of emotional conditions*** of the patient click on the *<Emotions> line*. Now you will see the graphical displays of emotions. If the charts are blue and directed down, the emotion is suppressed, if they are red and directed upwards, this emotion prevails in the patient at the moment of testing. If the charts are green, the patient's condition is balanced out. You may fully use the interpretation of the patient's emotional condition in case of a general average index of all tested points within the range of 40 -100 μA for Nakatani diagram or diagram with "3 sec" code and within the range of 50 -125 μA for diagram with "255 sec" code. The graphical display has an indication for "Rest" and the other for "Stress". The *"rest" indication* speaks about prevailing, balance or suppression of the corresponding emotion under the condition of rest (the emotion is not stormy but prolonged). The *"stress" indication* speaks about emotional breakdowns (the emotion is not prolonged but stormy). In the initial setup the graphical displays of emotions are positioned from left to right in order of suppressing emotions: e.g. we see the display of "ANGER" which suppresses "MIND" ("CONSIDERATION"), that is why "MIND" goes immediately after "ANGER". "MIND" suppresses "FEAR", that is why the third emotion will be "Fear" and so on. If you click on down square at the right of indications, then it will be activated, and the graphical displays of emotions will be arranged in order of **stimulation.** Click on this square once again to return to the order of **suppressing.**

If you want the interpretation of the emotional state of your patients to appear in the list of diagnosis (see *"Diagnosis—Diagnoses" bookmark*), you should mark with a bird-sign the square to be found opposite the word "Emotions".

You may print graphical displays while looking through them on the screen by pressing the key <**Print**> in main upper line.

2.7 Comparison of charts

There are three ways for comparison of charts in our program:

The first - an automatic comparison of charts of DSD-test;
The second - a comparison of any two graphs from the archive.
The third - a comparison of the graphs for same patient;

Printing a graphic comparison is carried out during their viewing on the screen when activated buttons <Print> on the main upper line. Be careful! Read the pop-up window that the program offers to print, and confirm your desire to print exactly this information by clicking on the button <OK>.

2.7.1 An automatic comparison of charts of DSD-test

This function is only to compare graphs with second by second codes "3" and "255" of DSD-testing. To do this, click the name of the desired patient in the list of 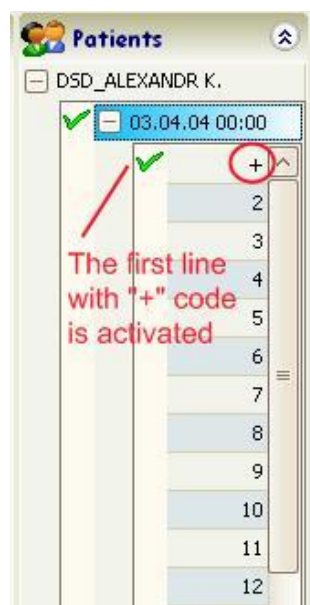patients. Next, open the list of his tests by clicking on the square in front of his name, and click on the desired date of testing in the list (there is a square in front of the date of DSD-testing always). In this case, the screen displays graphics "3" and "255". If you open a 'second-by-second' list of diagrams of this DSD-test by clicking on the square in front of the date of this test, the cursor in this list will be on the first line with code "+" (immediately after the testing or localization of the cursor in the list of patients at the date of DSD-test - it is such an option becomes active automatically, so you immediately see the chart in comparison). If you activate the *"Phantom—2D-Phantom» bookmark* so you'll see two phantom in comparison. If you activate the *"Diagnosis—Diagnoses» bookmark* so you'll see a full text transcript of DSD-test (described later in this Manual). If you deactivate the first line with code "+" in 'second-by-second' list of DSD-test by clicking on another line with another 'second-by-second' code, the automatic comparison is also deactivated and you will see only one graph, or a phantom or a text transcript for exactly that second's chart on the screen.

2.7.2   A comparison of any two graphs from the archive

ATTENTION! If the automatic comparison of charts "3" and "255" DSDI-testing is activated, you can not use the comparison charts provided below.

This function is activated by 'clicking' on the square in the middle of right window's border (Fig. 2.7) while viewing any graphic for short Nakatani test, or just one schedule of DSD-test (to display one graph of DSD-test - remove the automatic comparison by clicking in the list of diagrams to second-by-second line with the correct code-second). This viewing window is divided in half. In the upper half of the window a schedule and table of numerical values displays and in the lower half shows the same graph with the table of the same numerical values. But the lower half is as the foremost and always it shows the image of this chart, as in the upper part you can change the image at any chart of the archive, if you click on the line with its code. In the upper half of the screen you can display the schedule of any patient and any of his testing.

Disable this function of such a comparison can be re-clicking on the lower square of the preview window. The testing in the up half of the window became the current patient and the current testing.

2.7.3   A comparison of a graphs for same patient

This function will be active in the *"Charts—Compare diagrams" bookmark.*

The cursor in the list of patients should be on the correct name. Charts of the current patient appear on the screen. The first charts of archival list displayed on the screen, but not more than 15. For the DSD-test the diagrams with the code "3" and "255" appear by default. One chart for each testing displays for short Nakatani test. By default, charts are displayed separately, each with its blue circle of normal corridor. If it is necessary, you can combine all the diagrams by clicking on the square in the upper-right corner of the window, but diagram's normal corridors don't display on the screen. This kind of view is useful for comparing the amplitudes of ascents and descents graph line for the different dates of the tests. In addition, each line has a certain color and there is legend of these colors. Return to view some diagrams by repeated 'clicking' on the same square.

There are command buttons for displaying different types of charts for comparison in down line of this window (by default, a diagram is activated for viewing).

Elaborate on the description of the comparison functions for one system *("Charts—Compare diagrams—One system" bookmark)*. If we activate this *bookmark*, a graph of index one system (meridian) with the conditional normal corridor displays on the screen. Number of points on which this schedule will be built the program depends on the number of pre-extracted for comparison charts.
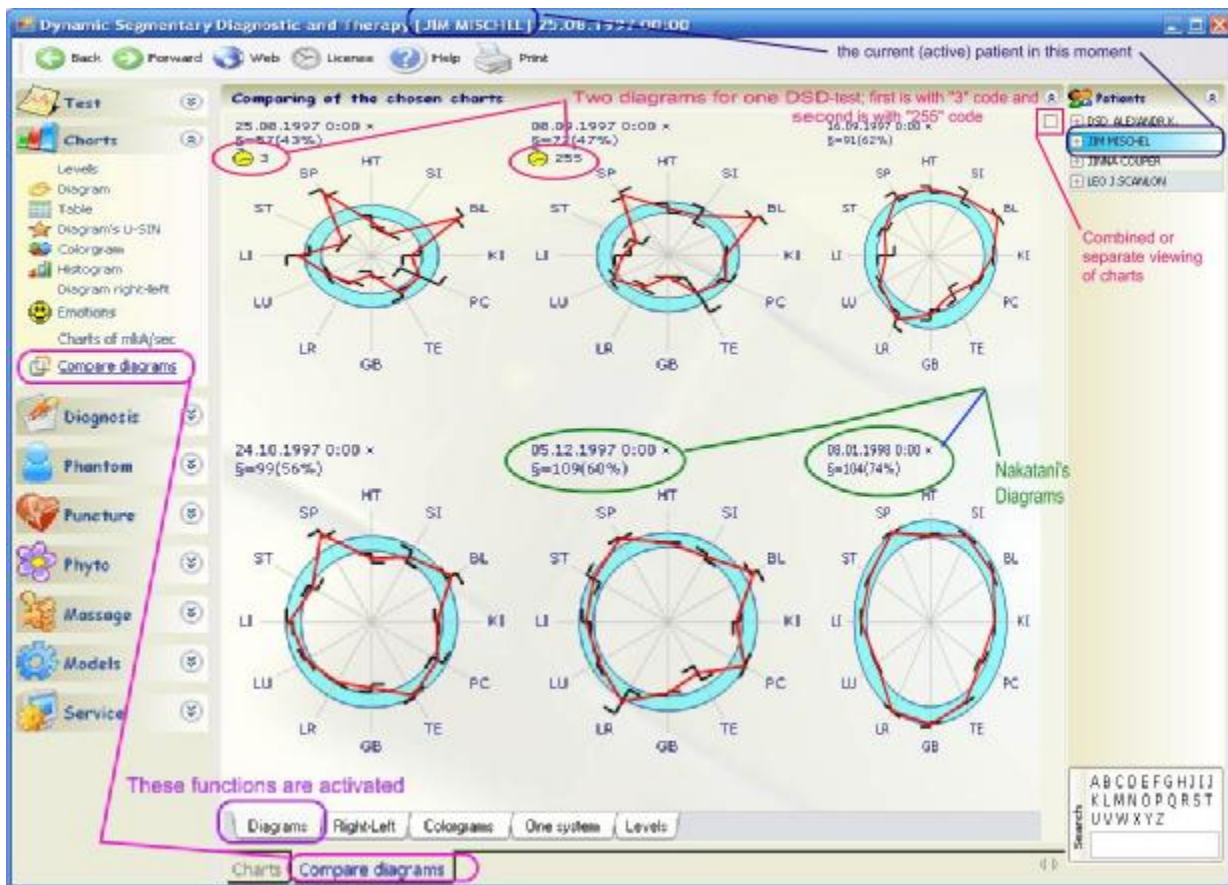
Fig. 2.8

There is graph (green line) below, which shows the difference between right and left indicators of the system (intervals allowable difference displayed by two horizontal dotted lines). At the intersection of a vertical dotted line we see the difference between left and right indicators for a specific chart (as noted above, all the diagrams are encoded date and time of testing, and there is additional second-by-second code for diagram of DSD-test).
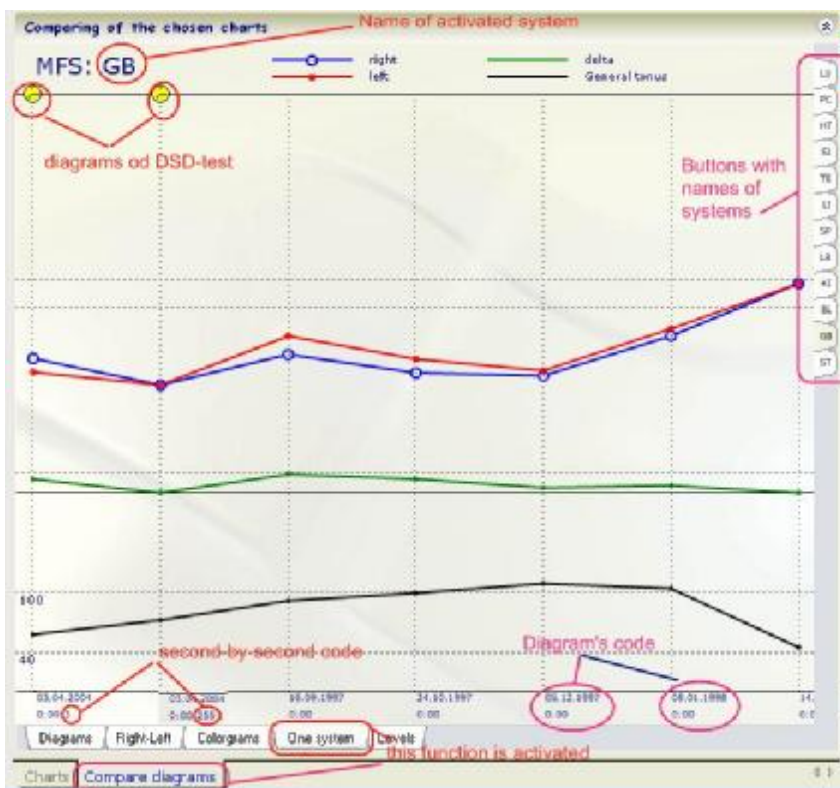
Also, there is lower graph (black line), which shows the average value of all indicators in all Systems (ranges from 40 to 100 mkA marked by two horizontal dotted lines). There are a buttons with the names of systems on the right edge of the window. Click the desired button for showing the performance of any system (as noted above – "LUNG" system is always enabled the default).

By default, showing begins with a "Lung" system. There are vertical dotted lines on the grid coordinates in terms of constructing such a graph. There are the date and time (and second of DSD-test) of diagram from which to take the index of this system below this line. If the top line with a symbol - a yellow dial, this figure is taken from the chart DSD-test (second-by-second code of this diagram is indicated below the date of testing). If this is not the yellow dial, this figure is taken from a single chart of short Nakatani test (date and time of testing as indicated below by the dotted line). The blue line displays changing of the right indicator on

the chart, and the red line displays changing of the left indicator (two horizontal dotted lines display intervals of conditional normal corridor).
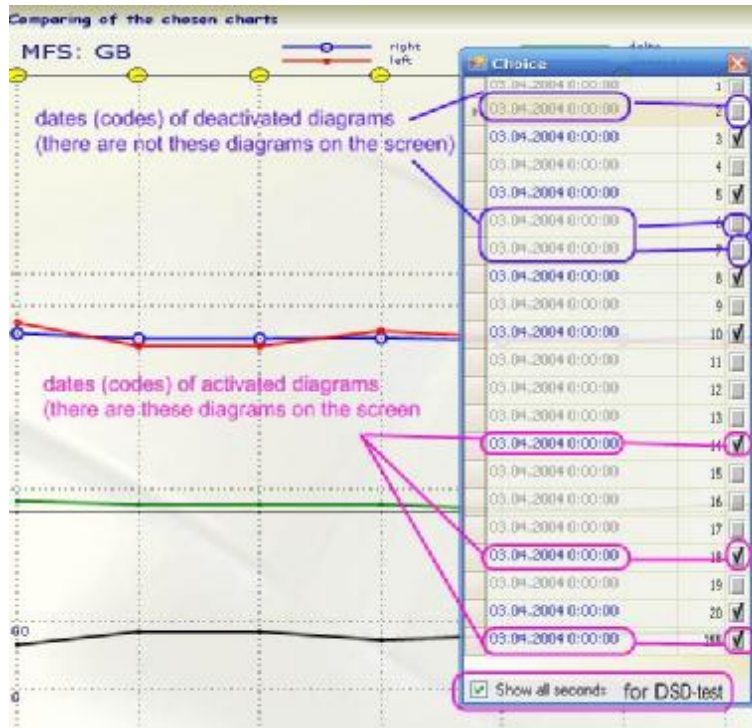
The program allows the user to select the desired comparison charts and display its on the screen (but not more than 15).

This feature can be activated when viewing any graphics, and at any time. For this click by mouse on any point in the window of comparative viewing. A special window with a list of dates of testing will appear on the screen (there are second-by-second codes for DSD-diagrams in an additional column). By default, charts DSD-test on this list are shown only diagram with the code "3" and "255" (if you want to activate a list of all the DSD-diagrams, then activate the "Show all seconds" square) . There is a special mark opposite to date of testing - this means that the chart will be displayed on the screen for comparison. If you click on the field with this mark - mark away, and this figure "will go" on the screen. If you click again on the field and return the mark, then this figure will reappear on the screen. Thus, you can display the necessary chart for you. Remove selection window to the usual method for WINDOWS.

3. DIAGNOSTIC INTERPRETATION OF TEST RESULTS FOR DISTAL ZONES

3.1 The recommended procedure for interpreting the results of DSD-test

Usually, when we interpret the results of the dynamic segmental diagnosis:

The First, we interpret the histogram of levels violation ANS (its are displayed automatically after the completion of testing the latest skin zone),

The Second, we look the these diagrams – diagram for low-power probe signal (a second code "03") is compared with the diagram on the screen for the maximum possible probe signal (a second code "255") - this is done with the work of the archive charts

The Third, we view diagnostic conclusion (this text will be on the screen when we activated *"Diagnosis--Diagnoses"* bookmark);

The Fourth, we view the phantoms, which showing the status of morphological systems in colours on the schematic for inner organs - we compare the two phantom, a first is for low-power probe signal (code "3") and second phantom is for the maximum possible (the code "255"). Phantoms compared on the screen when activated *"Phantom—2D-Phantom»* bookmark.

Print all information from the screen by pressing the <Print> while viewing the information on the screen.

3.1.1 Viewing of a diagrams

In the second variant of the diagnostic testing provision is made for every second diagrams for each testing, i.e. diagrams are built for every second from the beginning of the test up to the plateau phase. All these diagrams are stored in the program archive and coded in a certain way. When the testing of the last representative area is finished and the button <To save…> is activated, the histograms for "Levels…" of the condition of ANS is displayed on the screen in comparison and its are built based on the current strength indices for the diagram's code "3" and code "255" (plateau phase). The main histogram is a bar graph with the code "255", and the histogram for the 3rd second, in this case is more of historical interest, as a way to test for Nakatani method is very common in the world.
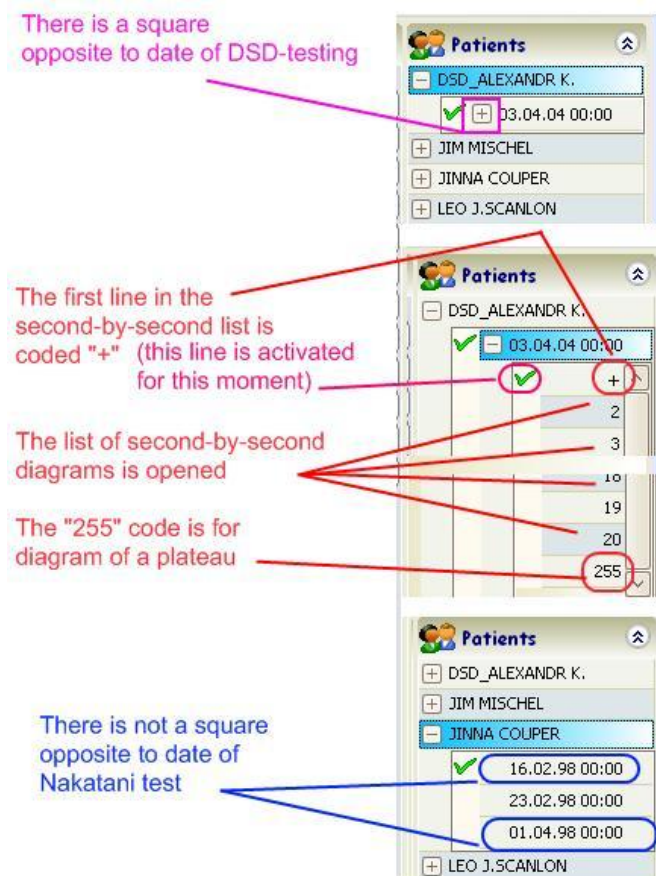
Check the cursor in the list of patients should stand on the patient's name, which was held diagnostics. Each test for patient is identified by date and time of this testing. Click on the square with a cross opposite the name of the current patient and make sure that line with the date of current testing was activated. If, there is a square opposite the date of testing, so this means that this testing is DSD-test. And if you activate this square, so the list of second-by-second diagrams for this DSD-testing will be opened. Each diagram is coded number second test from 2 to 59. The first diagram is coded with "+" because is a special line. When we activate a date of DSD-testing, there is a mark opposite this line. The latter line, regardless of the duration of DSD-test coded the number-second "255". This diagram is reaching on plateau (maximum value).

If there isn't the square opposite the the date of testing, so which means that the testing was conducted by a short Nakatani test and only one diagram of this test for the 3rd second was saved in the archive. Since this diagram is one only, then encode it makes no sense.

To test Nakatani always only one diagram may be present. The program will display your chosen graphic, diagnoses, phantoms, automatic planning of therapy for this chart.

For the long DSD-test can be active at once, two diagrams with the code "03" and the code "255", in this case, opposite to the first line in the list, second-by-second code having a code "+" should be checked (it is

There is a square opposite to date of DSD-testing

The first line in the second-by-second list is coded "+" (this line is activated for this moment)

The list of second-by-second diagrams is opened

The "255" code is for diagram of a plateau

There is not a square opposite to date of Nakatani test

such an option becomes active, if you put the cursor on the date of such testing). If you do move the tick to the next line, click on the code of the second of this line, then only one diagram for this second DSD-test will be the current

diagram. And then all the graphs, diagnostic conclusion and phantoms will be presented in a simplified form only for this one diagram.

In order to determine the depth of the functional system affection and to reveal a hidden pathology in the second variant of testing (the Dynamic Segmentary Diagnosis**)** you should make a comparative assessment of the two diagrams:

1) diagram of excitability of the neurone apparatus under the influence of a light stimulus (this diagram has code "3" in the 'SEC' column)

and

2) diagram of reaching the plateau phase, i.e. the diagram built according to maximum values of the current strength (this diagram has code "255" in the 'SEC' column)

For this purpose place the cursor on first line in second-by-second list for the necessary date and time in the table of measurements. In this case during viewing the chart two diagrams marked with the same date and time but bearing different codes ("3 and "255") will appear on the screen. The results of testing with a light stimulus (diagram code"3) and with a maximum possible stimulus (diagram code"255") are compared for each functional system. The table below shows possible variants of comparison for these two diagrams.

The most stable pathological changes in functional systems are repeated on diagrams "3" and "255" independent from the stimulus strength. When looking through diagnostics conclusions in DSD-test, diagnoses for the two diagrams"3" and "255" will be displayed on the screen. At the beginning of the diagnoses list there is the following explanation: (++) at the end of the diagnosis means pronounced affection of the neuron apparatus, (+-) means moderate affection of the neuron apparatus and (-+) means compensated, i.e. still latent affection of the neuron apparatus.

Table

#	Deviation of electroconductivity index on the diagram related to the norm range		Interpretation
	Diagram code "3"	Diagram code "255"	
1	Below the lower border of the norm range	Below the lower border of the norm range	Deep affection of the neurone apparatus of the corresponding functional system which, as a rule, accompanies organic pathological changes in this functional system – code of diagnosis (++); there is blue color in phantoms.
2	Above the upper border of the norm range	Above the upper border of the norm range	Stable increase in the excitability of the neurone apparatus of the corresponding functional system which, as rule, leads to increasing activities of this functional system – code of diagnosis (++); there is red color in phantoms.
3	Below or above the norm range	Within the norm range	Unstable disturbance of the neurone apparatus of the corresponding functional system which, as a rule, leads to unstable vegetative dysfunctions in this functional system – code of diagnosis (+—); there is blue or red color in phantom code "3" and there is green color in phantom code "255".
4	Within the norm range	Below the lower border of the norm range	With increasing stimulation there is a damping response of the neurone apparatus what, as a rule, means that the corresponding functional system is in a hidden (compensated) phase of pathological changes – code of diagnosis (—+); there is green color in phantom code "3" and there is blue color in phantom code "255".
5	Within the norm range	Above the upper border of the norm range	With increasing stimulation the response of the neurone apparatus is inadequate to the stimulus what means that the corresponding functional system is in a hidden stage of functional disturbances – code of diagnosis (—+); there is green color in phantom code "3" and there is red color in phantom code "255".

3.1.2   Features of the text of diagnostic findings for DSD-test

You must activate the *"Diagnosis--Diagnoses" bookmark* for displaying diagnostic conclusions on the screen. There is diagnoses text on bases two diagrams for code "3" and code "255" on the screen. (as noted above, such a viewing is automatically carried out on the grounds that the first line of code "+" in the list of second-by-second chart DSD–test activates). There is a special code at the end of each diagnostic conclusions, this code consists plus or minus (see table above), and there is legend at the beginning of the list of diagnoses. If there is code (++) at the end of the diagnosis, so this diagnosis is the pronounced lesions of the neural apparatus, if there is code (+—), so it is a high degree of destruction of neural apparatus, if there is code (—+), so it is compensated or even latent phase defeats neural apparatus.

3.1.3   Viewing of phantoms for DSD-test

You may also find out if pathological changes in the functional systems are stable or unstable while comparing the phantom colour in case of a light (diagram code "3") and a strong (diagram code "255") stimulus. To display these phantoms for comparison you should activate the *"Phantom—2D-phantom" bookmark*, display these phantoms on the screen automatically. Compare the colour of theses phantoms in table. For interpretation you may use the table given above where light blue and deep blue colours denote various degrees of the index sinking below the lower border of the norm range, lilac and red colours denote various degrees of the index rising above the upper border of the norm range and green colour points that the index lies within the norm range. Be careful to remember that the diagnostic interpretation is most reliable when the *the map of a finger near a brain* on the phantom is coloured green.

Use the diagram coded "255" for administering **any therapy using biologically active points as well as for oriental massage** while conducting DSD-test**.**

For physiotherapy and biologically active additives use the diagram coded "255".

3.2   Principles of text output diagnostic conclusions

Every diagnostic value is obtained by interpreting the electroconductivity indices of the skin after the vegetative regulation of dermatoms has been stimulated by electric current. The main principle lying at the base of the programme interpretation reads **"The patient's condition while he is being tested must be as near as possible to his every day condition."** Taking medicines, any influences on the patient (therapeutic as well as harmful ones), intoxication with alcohol or other gifts, menses can lead to changes in functioning of the sympathetic trunk ganglions. Such changes are in the majority of cases of a temporary character but as testing takes place they may change the character of the skin response to the test signal what can influence the reliability of diagnostic conclusions. The most reliable results of the indication interpretation (80-90% depending on the organ system) will be obtained, if the patient is staying in his usual condition for a long period of time, i.e. if he lives his usual life, does not take any medicines, does not drink alcohol beverages and if he does it that must be his every day condition, and so on. Conditions for conducting a diagnostic investigation for initial diagnostics of vegetative dysfunction are described in a more detailed way in Section 3.1. (The data are taken from the monograph by Igor V. Boitsov "Electropunctural diagnostics according to "ryodoraku", Vitebsk, 1996 and from the dissertation thesis by the same author "Electropunctural measurements: interpretation, software and practical usage", Minsk, BelMAPO, 1999).

3.3   Conditions for Conducting Initial Diagnostics

Condition 1. The diagnostic procedure takes place before the organism has been influenced with some factors, which may lead to changes in functional condition of the vegetative ganglions, namely:
- some medical treatment
- taking medicines
- taking alcohol 3 days before the testing takes place
- drinking coffee, strong tea 5 hours before the testing takes place
- powerful radiation of the organism 3 days before the testing (e.g. examination by means of X-rays, NMR, radioisotopes)
Exceptions of the rule are the cases of control over the influence of these factors on the patient's organism.

Condition 2. The ganglion activities in women patients changes during menses, pregnancy and lactation, that is why the function of ovaries must be estimated in these cases with regard to a changed norm range (*please, consult the programme designers!*)

Condition 3. It is better to conduct the testing before psycho-emotional strains of a working day though such strains reveal, as a rule, more "weak" sites in the organism.

Condition 4. The patient must have a rest for 10 -15 minutes before the testing. If the patient feels nervous during the procedure, it leads to the release of adrenaline into his circulation and to the increase of sympathetic activities in which case the indications will be higher. So you must give your patient enough time to feel at ease. If very high indices (>105 µA) are displayed during the testing procedure practically on all points, you should calmly bring the session to the end, give your patient 10 - 15 minutes more for rest and repeat the procedure of testing. The interpretation of the testing must be made according to the results **of the second session!!!**

Condition 5. The patient must undergo the testing on an empty stomach or have meals 2 hours before the testing procedure (but it does not mean that he must not eat more than 2 hours before the testing).

Condition 6. The skin in the tested areas must be healthy, without any problems of vegetative trophic innervation (e.g. distal polyneuropathies or neuropathies of the CNS).

Condition 7. The doctor must speak to the patient before the testing in order to reveal the factors which may influence the patient's organism and to take them into account during the testing.

3.4   Diagnostic Conclusions

"Diagnosis—Diagnoses" bookmark should be activated for text's interpretation of test result. The screen will display the list of diagnostic conclusions for the current measurement *(the time of the measurement and the patient's name will be given in the upper line on the screen)*. All diagnoses are divided on systems.

Before every diagnosis you will see the signs * or **. The sign * means that this diagnostic indication is a vegetative

functional disturbance at the moment of testing. The diagnostic conclusions with the sign ** are prognostic for the case if the revealed vegetative disturbances become stable. If these disturbances are characteristic of the patient for a long time, the prognoses may manifest themselves in the patient at the moment of testing.

To switch on/off the function of looking through prognoses you must put or remove the bird-mark in the corresponding square, which is located down on the screen.

For the DSD-test diagram, as you remember, the program gives a conclusion according to the degree of the neuron apparatus affection. Be careful to take into consideration that, when you turn off the function of looking through prognoses for some diagnoses, the degree of the neuron affection is not displayed on the screen.

All algorithms for interpretation of the neurofunctional diagnostic results are intellectual property and know-how of the programme designers protected by Certificate RUSPATENT No 2002610520 !!!

If one screen page is not enough for all diagnostic conclusions, you can use keys <**PgUp**> and <**PgDn**> or corresponding signs on the screen to look through the list of diagnoses.

For a Nakatani testing the programme foresees a possibility to look through the list of diagnosis with a calculated percentage of probability for every diagnostic conclusion. To switch on/off the function of probability percentage you must put or remove the bird-mark in the corresponding square, which is located on the lower line on the screen.

You can print the diagnostic conclusions while looking through it in the form as they are displayed on the screen (with or without prognoses, with or without probability percentage), if you press the key **<Print>** *(on the upper/main board of the screen)* and confirm it by pressing <**OK**>.

Before printing the diagnostic texts you can add its with your own conclusions. To switch on to add text you must click the <Add> key, which is located on the lower line on the screen. Such additions are made according to standard edit procedure of WINDOWS.

The programme foresees a possibility to save the diagnostic conclusions for the patient in the file of "txt" format. To do so, click on the <Save> key in the lower line of the screen while you are looking through the list of diagnoses. Then, as the corresponding window appears, you are to decide where to save the file *(most often it is a flexible disc)* and, if necessary, how to rename it *(in the initial set-up the file is named diagnoz.txt)*

3.6   Parasite Series

"Diagnosis—Parasites" bookmark should be activated for Parasite's interpretation.

A special programme will start which calculates the percentage of favourable conditions in the organism of the current patient for the existence of certain parasites. In other words, the programme calculates the percentage of probable detection of certain parasites in the patient's organism.

Top the left of the parasites' names there are their codes, namely

St   - bacteria/saprophytes
Pt   - pathogenic bacteria
St/Pt   - bacteria/saprophytes changing into a pathogenic form
WR   - round worms

WT   - flat worms
PS   - protozoa
Virus - in the names for viruses the word **virus** is present.

To print the list of parasite for the current testing click on the button **<Print>,** while looking through the parasite series.

3.7   Body Mass Index

"Diagnosis— Body mass index" bookmark should be activated for BMI interpretation.

Body Mass Index shows the degree of correspondence between the person's height and his mass. First you are to set the patient's height in **cm** on the corresponding scale. Bring the mouse arrow to the sign of the slider on this scale, press the left button of the mouse and, keeping it pressed, move the slider upwards or downwards until the necessary indication in cm is reached. When the slider is on the necessary point, which corresponds to the height of your patients, release the mouse button. In the same way you are to set the patient's body mass in **kg** on the corresponding scale. As it takes place the yellow stripe of the right colour scale will show you if the value is within or outside the normal range. The body mass index (BMI) will be indicated down.

3.9   ANS

"Diagnosis— ANS" bookmark should be activated for ANS interpretation.

The upper line shows the sum index (General Tonus of the basic centres of vegetative regulation), which is equal to Yin+YANG as well as the average index of all tested points.

The Parasympathetic-Yin - indications will be displayed on the left half of the screen: a total index of Yin for upper extremities, a total index of Yin for lower extremities, a total Yin index, a number of prevailing Yin indices for upper extremities, a number of prevailing Yin indices for lower extremities, a number of prevailing Yin indices, a number of insufficient Yin indices for upper extremities, a number of insufficient Yin indices for lower extremities, a number of insufficient Yin indices, the difference between the prevailing and insufficient Yin-indices (where "**+**" means that prevailing indices overweigh and "**-**" means that insufficient indices overweigh). On the right half of the screen the Sympathetic-Yang - indices are presented in a similar way. In the line "Vegetative tonus" you may see which of the indices (a total Yin or a total Yang) is dominant and the percentage shows the degree of their dominance (the least index is taken for 100%).

If any indicators (parasympathicus or sympathicus) dominates more than 30%, while the difference of quality indicators for more than 3 units ("Calc coefficient" line shows a quality indicators) then this indicates the predominance of the activity of the autonomic nervous system. What has this dominance may be absolute, when these 3 units constitute "excess" of the ANS or relative, when these 3 standard units are other disadvantages of ANS.

Print in the usual way.

3.10   Phantom

The programme foresees a possibility to look through the results of diagnostic interpretation in the form of a phantom (which is a schematic image of a man with his inner organs) where vegetative (functional) disturbances of organs and their systems revealed by testing can be shown by means of a colour scale (fig. 3.2.) View phantom is possible in 2D and 3D versions. But we can compare just flat 2D-phantoms on the screen.

3.9.1. How to look 2D-Phantom

"Phantom—2D- Phantom" bookmark should be activated for 2D-phantom's interpretation.

The colour of the organs depends on their functional disturbances: light/dark blue colour means insufficiency, pink or red - excess, organs functioning normally are coloured green.

Take into account that the correlation between the normal and the abnormal is the most reliable when the tonus of the organism to be tested is normal, i.e. when the average index of all tested points lies within the range of 40/50 – 100/125 mkA (Nakatani test/DSD-test) and *the map of a finger about a brain* on the phantom is coloured green. If this index is lower than 40/50 mkAμA., the colour of *the map of a finger near a brain* changes from **light blue to dark blue and then to yellow**. In this case all "blue" organs remain pathological, and the "red" ones may be not absolutely but relatively excessive. If the average index is higher than 100/125 mkA, the colour of *the map of a finger near a brain* on the phantom becomes **pinkish-red**. In this case the red colour of an organ speaks about its pathology most reliably, while the "blue" organs may be relatively deficient.

If the organ is **not coloured green,** there is an obligatory explanation of the colour in the list of diagnosis, i.e. a corresponding diagnostic conclusion. At the same time clicking by the mouse over the center of the abnormal organ on phantom displays the text of the diagnostic conclusion on the right corner.

There are the following areas on the phantom whose colouring depends on the results of diagnostic interpretation of the obtained parameters (fig. 3.1):

1) Condition of the tonus of cerebral arteries:
   (a) temporal
   (b) parietal
   (c) frontal
   (d) occipital
2) Condition of the brain working capacity
3) Functional condition of the visual analyser
5) Condition of the mucous coat of the nasopharynx
6) Functional condition of the endocrine glands
   (a) hypophysis
   (b) thyroid gland
   (c) adrenal glands
7) Predisposition to diseases of the muscle and tendon apparatus
8) Functional condition of the lungs:
   (a) of the right one
   (b) of the left one
9) General tendency to increasing or decreasing of the vessels tonus *(shown as an aorta)*
10) Functional condition of the heart parts
   (a) of the left ones
   (b) of the right ones
11) Functional condition of the liver
12) Changes of the smooth muscles tonus of the gallbladder
13) Functional condition of the pancreas parts:
   a) caput of pancreatis
   b) cauda of pancreatis
14) Functional condition of the kidneys:
   (a) of the right one
   (b) of the left one
15) Changes in the tonus of the
   (a) cardiac sphincter of the stomach
   (b) pyloric sphincter of the stomach
   (c) stomach myometrium
16) Condition of the stomach mucous coat
17) Condition of the duodenum mucous coat
18) Tendency to peptic ulcer of the
   (a) stomach
   (b) duodenum
19) Changes of the peristalsis of the
   (a) small intestine
   (b) ascending large intestine
   (c) descending large intestine
20) Predisposition to diseases of the mammary glands in women
21) Condition of the integument
22) Changes on the tonus of the urinary bladder
23) Condition of the uterus
24) Functional activity of the ovaries
   (a) of the right one
   b) of the left one
25) Changes in sexual activity of men
26) Diseases of the prostate

The colour of *the map of a finger near a brain* characterises **the general tonus** of the organism (the explanation of the colour scale see in the legend on the screen).

To print the phantom you are to click on the button <**Print**> while looking through the phantom.
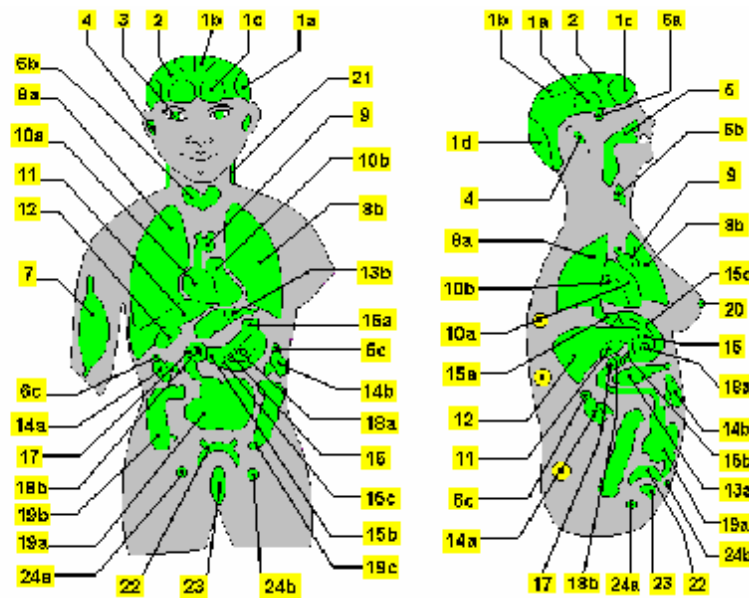
Fig. 3.1

3.10.2. Comparison of Phantoms

The programme provides you with the possibility to display on the screen two phantoms of the same patient simultaneously, you can also compare phantoms of two different patients, even if they are patients of different sex. Click on the <To compare two phantoms> square. As it takes place, the left side of the display will show you the phantom with which you are comparing, while the right part of the display shows you the current phantom. To change the current patient or the current measurement by clicking to necessary patient's name or date of testing. To cancel the comparison mode click on the <To compare two phantoms> square once again.

Attention! If for some patient (e.g. Mr. Green) you look through the results of some measurement (e.g. Nr. 1 for Mr. Green) and then change to the mode of looking through the phantom and select for comparison some other measurement (e.g. Nr. 2 for Mr. Green) or even some other patient (e.g. Mr. White), so when you return back to the looking-through mode for one phantom only, the current measurement now will be that **other** measurement (e.g. Nr. 2 for Mr. Green) or the current patient will be that **other** patient (in our case Mr. White).

To print the phantoms in comparison you are to click on the button <**Print**> in the mode of looking through them.

3.10.3. How to look 3D-Phantom

"Phantom—3D- Phantom" bookmark should be activated for 3D-phantom's interpretation.

Colours are similar 2D-phantom. Paint phantoms 2D and 3D for the same test is identical. Schematic arrangement of organs is also similar to 2D-phantom. If at first time you have raised the question for name of one area on the phantom-3D, then compare it for painting of a 2D-phantom. In addition to the phantom-3D introduced "oesophagus" region, which is located above the cardiac of the stomach, but there are not mammary glands, skin, muscle system and the scheme of the head missing on 3D-pantom. Please, look these areas on the 2D-phantom. Be careful - the scheme also highlighted areas of gastric cardiac and pyloric, muscular layer and mucosa, as well as, the area of ulcer, and small intestine is divided into very bowels and 12 duodenal, which has a region of the ulcer.

Automatically, when you activate some patients in the archive, phantom-3D is rotated to the front of you. There are buttons turn control phantom on the right. Blue arrows in their activation command to rotate in one direction or another. But if you re-click on the blue arrow, rotation stops. All the organs can be easily seen on 3D-scheme at different angles of rotation. The green arrows in their activation command to make a single turn in one direction or another.

Print 3D-phantom can be at any angle of rotation, while viewing it by clicking on the button <Print>.

4. CHECK–UP OF SPINAL NERVES STATUS AND CORRESPONDING VERTEBRAL MOTOR SEGMENTS

The check up is done only by DCD - test !!!

The status of spinal nerves is checked up by determining to which extend the vegetative provision of their posterior medial branches is assured. The aim of the test is to diagnose any pathology of the corresponding vertebral motor segment (VMS) which consists of one intervertebral disk and two adjacent vertebrae with associated joints and the ligamentous unit.

The testing procedure runs in the areas which are situated paravertebrally along the vertebral column.

The patient takes the passive electrode in the right hand and holds it so during the whole testing procedure (2-3 drops of sodium chloride solution placed previously on the patient's palm provide for a better contact). The active electrode is placed on the skin in the points of exposure of posterior medial branches in turn, first on the left and then symmetrically on the right side.

In the cervical region the electrode is placed on the line running along the vertebral column in the middle point between the posterior medial line and the outer margin of the trapezius muscle.

In the thoracal region the electrode is placed on the line running along the vertebral column in the middle point between the posterior medial line and the line running along the inner margin of the scapula.

In the lumbar region the electrode is placed on the continuation of the line running along the vertebral column in the middle point between the posterior medial line and the line running along the inner margin of the scapula.

To make the application of the complex more convenient the anatomical atlas is displayed on the screen where the position of the active electrode is shown and the textual explanation for the testing procedure of the current area is given. As a rule, the electrode is placed on the level of the spinous process of a vertebra or at the level between spinous processes of two adjacent vertebrae. The left or the right side for the current placement of the electrode is always shown on the screen.

The VMS group for testing is to be chosen beforehand till the testing procedure is to be started.

The following VMS groups are generally used:

1) thoracic VMS 2) cervical and lumbar VMS 3) VM segments which neurovascular bundles contain the main anterior radicular cerebrospinal arteries which are of importance for the blood supply of the spinal cord. Besides, if the physician intends to check – up some VMS selectively to his discretion, he should indicate group nine of testing areas, write down or remember the sequence of the VM segments chosen for testing and accomplish the testing procedure without taking into account the VMS atlas on the screen.

The area for testing is chosen in the following way

1. Activate the *"Service—Options—05.Customization of mapping—The zone of testing"* bookmark;
2. Choose a necessary line #7 or #8 or #9;
3. Click <Save>

The program will automatically proceed to the algorithm for interpretation of the data obtained from the vertebral column.

Please be careful, since every group of testing areas has its own rules of interpretation and the interpretation of the obtained values will be done only in the same bookmark. Each diagram was coded by zone's number (7, 8, 9). For example, if you wish to interpret some measurements of distal areas (which are the first in the list), do not forget to activate the "7/2 – Thorax vertebra" bookmark so that the corresponding algorithms could be activated.

The device is to be adjusted with open and closed electrodes according to the rules described in chapter 2. In the process of testing, after the active electrode is placed on the area to be tested, the electrical current is provided automatically and the nervous endings of the skin and of the subcutaneous tissue are irritated. It leads to the appearance of an afferent impulse and, via internuncial neurons, to the stimulation of efferent neurons in the corresponding segments of the spinal cord. The electroconductivity of the skin changes and we see on the screen the running line of the diagram reflecting this process. In cases when there is a compression or an ischemia of an afferent or an efferent root we will notice an inadequate response from this segment.

When the testing is over, activate the <To save…> button (simply touch the patient's skin with the active electrode while the patient is holding the passive electrode in his hand). You will be automatically brought to the <**Archive**> of the program where the response diagrams of the current testing are shown. To enlarge the image, click the mouse on any of the diagrams. The red line demonstrates the process of excitability of the left VMS area, the blue one – of the right side and the green line demonstrates the normal value for the current testing for every second of the test. For printing press the <Print> button.

While saving the testing results in the archive, all the diagrams saved will be automatically coded by a number of the testing area list and presented in the column "Zone".

Note: If the line is horizontal and does not run upwards, it, as a rule, points to degenerative changes in the neurons of the spinal cord or in the cerebrospinal nerve itself. In order to define the level of affection more exactly, use the method for checking-up superficial and deep sensitivity.

All clinical questions, as well as aspects of anatomical structure and physiological functions of the spinal cord and vertebral motor segments, including variants of their pathological deviations which can be diagnosed by means of the DSD –test, are considered as internal information for specialists and are dealt with only at special seminars organized for users of the complex «POINTS». If you are not a specialist in vertebroneurology or manual therapy, we recommend you to take part in training at such a seminar.

To look through the images of the vertebral motor segments, activate the <2D-Phantom> bookmark on the left panel for bookmarks. The schematic image of the vertebral column will appear on the screen and all the obtained data will be shown as horizontal columns placed between two vertebrae symbolizing the status of the cerebrospinal nerves running through the intervertebral canals formed by the two corresponding vertebrae. The color of this horizontal column points to which extend the nerve is affected. The length of the column depends on the value obtained while testing the nerve in question. The vertical line running along the vertebral column, namely its color, demonstrates the general state of a particular region (cervical, thoracic, lumbar). The right side is marked by the letter "D" (dextra) and the left side – by the letter «S» (sinistra).

The response of a cerebrospinal nerve is tested for various signal intensity. The diagram of the response demonstrates the response reaction for every second of testing and the phantom shows the character of the response to a weak degree of irritation ("3" is the code of the left phantom on the screen) and to a maximum of irritation ("255" is the code of the left phantom on the screen).

After selecting the command <Print> the phantom will be printed out on a paper sheet of A4 size.

You can see two variants of the phantom. The 1st or the 2nd variant can be selected by activating of square in upper right angle of the window. The phantom of the second variant looks more realistic but in this case only one phantom, namely that with the code"255", is displayed (the number of the phantom displayed on the screen can be changed from "02" till "255" in archive list of DSD-diagrams).

Various colors of the phantoms have the following legend:

1) dark green color means that the response reaction lies within the physiological range calculated for the given patient at the moment of testing;

2) light green color means than the response reaction does not correspond to the physiological range and that the obtained value slightly deviates above or under the normal rage;

3) blue color points to insufficient response reaction which corresponds to a mild hypofunction;

4) violet color points to response reaction which corresponds to a mild degree of irritation;

5) dark blue color points to a low response reaction which corresponds to a medium degree of nerve hypofunction;

6) red color points to an intensive response reaction which corresponds to a medium degree of nerve irritation;

7) violet color points to a very low response reaction which corresponds to a severe degree of hypofunction;

8) yellow color points to a very intensive response reaction which corresponds to a severe degree of nerve irritation.

All diagnostic considerations from the current testing can be displayed on the screen by activated the "Diagnosis-Diagnoses" bookmark on the left main panel for bookmarks.

The phantom and the text of diagnostic considerations can be printed while you are looking through them by pressing the button <**Print**> on the upper main panel for buttons.

Note. If it is difficult to place the active electrode onto the necessary area because of anatomical peculiarities of patients (in many cases they are rather stout people), you should preliminary mark on the skin the projection of spinous processes along the posterior medial line. This is better to fulfill when the patient lies flat on his stomach and the pelvis part of the couch is lowered or if the patient lies across the table.

Note. The following anatomical and physiological peculiarities of the vertebral column are to be mentioned:

1) Spinous process VII of the cervical vertebra is, as a rule, the most protruding in the cervical-thoracic transition region. If you place your finger on this projection and take the patient's head backwards, spinous process VII remains on its place. If the spinous process moves from your finger in the ventral direction, you are dealing with spinous process VI while the seventh process is located lower.

2) The lower margin of the scapula corresponds to the level of spinous process VII of the thoracic vertebra;

3) The lower margin of the costal arch corresponds to the level of the spinous process of thoracic vertebrae XI-XII;

4) The level of the iliac bone crest corresponds to the level of the spinous process of lumbar vertebra IV .

5) Spinous processes of the thoracic vertebrae are positioned in the dorsal and caudal direction, that is why their most protruding part corresponds to the body of the lower located vertebra. The closer is the location to the lumbar area the more horizontal becomes their downwards direction so that the spinous processes of the lumbar vertebrae are already located in the dorsal direction and their most protruding part corresponds to the body of the same vertebra.

5.   PHYTOTHERAPY

5.3 How to Work With Programme "Phytotherapy" in Case of Lacking of Yin and Yan Balance
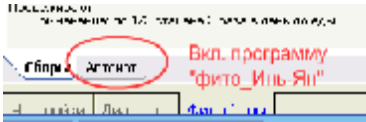
"Phyto—Phitotherapy—Yin/Yamg" bookmark should be activated for phytotherapy. As it takes place, a window opens on the left half of the screen where you can read a list of medicinal plants recommended for the current patient on the base of the current testing *(the name of this current patient and the date of his or her current testing are represented in the uppermost line of the screen).*

Opposite the plants' names you see fraction numbers judging by which you can select the most recommended medicinal plant for the current patient. This medicinal plant will be the more adequate the more its numerate is approaching its denominator (it is better when the fraction is 4/4,4/5, 5/5 and the like)

Select from the list only those medicinal plants which fraction numbers have the highest numerate and the highest denominator, the rest fraction numbers are to be deleted (the window foresees such editing functions). If there is a **minus** sign before the fraction number, this medicinal plant is recommended in case of channel **deficiency**, if there is a **plus** sign, the medicinal plant is applied in case of excess or heat syndrome.

At the end of the list there is an instruction about preparation and application of these plants to compensate the deficiency of energy or to decrease the excess and heat.

Located up the plant list there is a button <Triangle>. If you activate it, a special setup window will open which provide you with the following possibilities:

1) after opening the model archive (click on the triangle in the upper line of the set-up window), you may select and adjust the Yin-Yang phytotherapy for the group of patients who served as a base for building - up of this model *(as it takes place, in the window for the medicinal plants list you will read the name of the model, which served as a base for selection, in the first line and below the names of the plants and the way of their preparation and application)*;

2) After clicking on the '50' triangle in the last line you may adjust the strictness of medicinal plant selection *(50% is setup initially, the most strict selection takes place under "100%", and the least strict under "25%").*

6. ACUPUNCTURE THERAPY

"Puncture—Acupoints" bookmark should be activated for acupuncture therapy. A corresponding widow appears on the screen. There is a list of recommended exposure points to the left a narrow window. There is a virtual instrument panel for the electro-therapy to the right in a big window. There are bookmarks with command lines under the virtual instrument panel.

   Section "Acupuncture therapy " includes the following features:

1) Automatic selection of points for the acupuncture therapy. It based on the extraction level and type of violations of the physiological equilibrium in the system of meridians;

2) Background information of the localization of acupuncture points, it's functional significance for the system of meridians. A colour atlas of acupuncture points works with the background information;

3) Automatic impact on the acupoint by toning method with the adjustable current intensity (therapeutic - diagnostic module);

4) Automatic impact on the point by sedation method with the adjustable current intensity (therapeutic - diagnostic module);

5) The search points by the degree of reduction of skin electrical resistance in the area of points (therapeutic -diagnostic module);

6) Viewing modes for different exposure techniques puncture therapy;

7) Calculation of "open points" for any day of the year and time of the day;

8) Review and selection of additional points for impact;

9) Viewing techniques puncture therapy for nosologies.

5.1. How to Select Points for Acupuncture Therapy

6.1.1 Looking through prescription for conducting acupuncture therapy

   On the base of diagnostics results the programme automatically determines acupoints, which are necessary for treating the current patient and displays its in the corresponding window. Red colour of point's name means that the recommended type of influence onto this point is stimulation. Blue colour of point's name means that the recommended type of influence onto this point is sedation.

   If you activate the square "Mark" right opposite to a point's name, the bird-mark will appear to show that the point is stored in the archive, in "Case history of the patient" as the point used in the current session of the current date.

   If you activate the square "A" left opposite to a point's transcription, the information about this point will appear to show in special window.
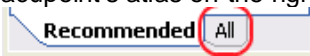
   If you click on the button **<Print>,** you will receive a printed version of the list of acupuncture points taken from the corresponding window alongside with the information about their localisation.

6.1.2. How to Work with "Acupuncture Atlas" Programme

   To work with "Atlas of Acupuncture Points" and to look through reference information about some point, you are to put the cursor by clicking your mouse above the name of the necessary point in the window with the list of recommended points. Then on an additional button line (located under the virtual device's panel) click on the button **<The atlas of Acupoints>.** You will see the atlas of this point on which the cursor was on the window of acupuncture points.

   If you activate the square "Scale" left-upper picture, the picture will be bigger.

   There are 2-4 buttons for viewing of acupoint's atlas on the right border of window (View 1-View 4).

   If you activate the *"All" bookmark* , the list with meridian's names appears in the left window.

   If you activate the some meridian's name, the list with acupoints names for this meridian appears in this window.
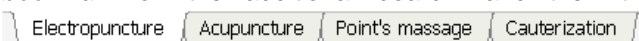
   If you activate the some acupoint's name and activate *"The atlas.." bookmark*, the atlas of this point appears in the big right window

   If you activate the some acupoint's name and activate *"…./Localisation of acupoint" bookmark*, the information about this point appears in the big right window.

   To return to the formula recommended by the points just click on the button <Recommended>.

6.1.3. Looking through Parameters of Influence

   To look through parameters of influence by other methods you are to click on *the <Parameters of puncture/…> bookmark* on the additional board and then the corresponding line for activating the necessary method . A table with necessary information will appear on the screen.

6.1.4. How To Select Additional Points of Influence

To look through and select additional points from reference tables (e.g. points for relieving pains of various localisation, points of symptomatic influence, etc.) you are to activate the *"Additional Points" bookmark* on the right additional board. You will see on display reference tables with points for different cases of your practice. To select points for treatment or for a previous looking through, click with your mouse twice on the point's name (in French transcription). This name (in English transcription) will appear in the left window "Recommended" of the screen and when you return to the window "Recommended" the selected additional points appear in the list of points suggested for treatment.

6.1.5. How to Calculate an Open Point

For automatic calculation of "**opened points**" of classical and extraordinal meridians, activate the *"Calculation acupoints" bookmark* on the additional board. A table will appear on the screen where, depending on the time of the day, the points will be represented which are open for influence for the current date. You may to change a date for calculation

6.1.6. How to Work with Programme
### *"Treatment of Separate Diseases"*

"Puncture—Nozology" bookmark should be activated for viewing of recipes for treating.

When the list of nozologies appear | AntiTabac | For increasing of weight | Impotation |, click with your mouse on the necessary name to select it for looking through.

6.2   Conducting electropuncture by treatment module

6.2.1   Instrument searching of acupuncture points

You can use the device for searching of acupoints. The essence of the search is to find a point that with the lowest electrical resistance in the area of the skin, which presumably should be conducted by acupoint. To activate
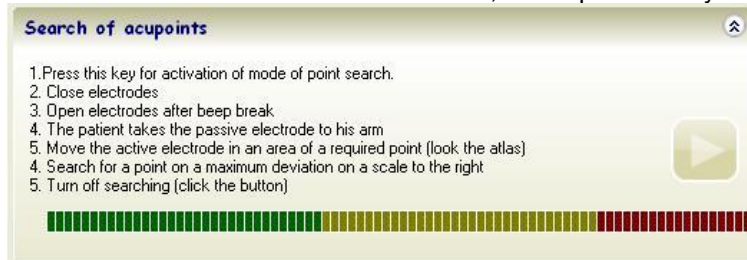
"Puncture—Acupoints—Search of acupoints" bookmark for initializing the process of finding the point. How to find you carried out on the screen.

The maximum deviation on the scale is always fixed at 10 seconds, and the current deviation varies depending on the location of the active electrode at or near the point.

Note! Search function is not on the "ARM-PERESVET" device.

6.2.2. How to stimulate point

Input an active treating electrode to skin's point. A patient takes a passive electrode to his hand. Click the Start button of the current for tonification. Regulate a strength of current by the virtual slider ("Current's regulator"). Other parameters of current are regulated automatically. A procedure of stimulation will finish automatically from 2 min.

6.2.3. How to sedate point

Input an active treating electrode to skin's point. A patient takes a passive electrode to his hand. Click the Start button of the current for sedation. Regulate a strength of current by the virtual slider ("Current's regulator"). Other parameters of current are regulated automatically. A procedure of sedation will finish automatically from 5 min.

7.   HOW TO WORK WITH PATIENTS' ARCHIVE

7.1.   General Information about "Archive"

   In its archive the programme stores the data about all your patients and of all measurements (POINTS\points.mdb file). We advise you from time to time to copy the archive file onto a flexible disc so that you can always have an opportunity to restore your patients' archive in case of its damage. This function is described below".

   To select a patient you should find his name in the list first and then click on it with the mouse (right border of the screen). This patient automatically becomes the current, and the program will now display information about the patient. Name of this patient is displayed at the uppermost line of the screen.

   To find the necessary name more quickly you can click on the first letter of the name in the given alphabet (below patients list).

   If you fail to find your patient in the list, *you can find his or her name*, if you place the cursor in the line "Search" (to be found under alphabet) and enter some first letters of the patient's name (in capitals) from the keyboard. The cursor in the list of patients will move to the corresponding name.
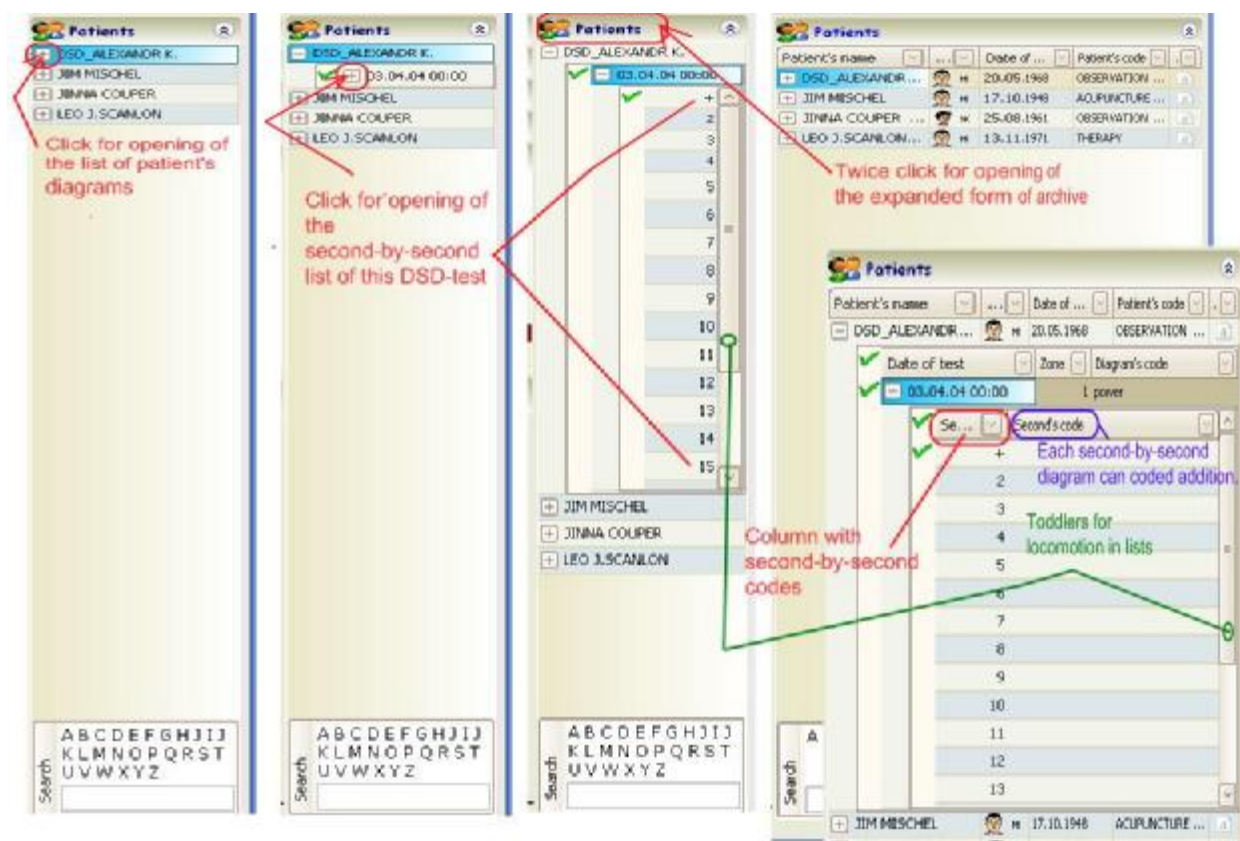
Fig.7.1

   Each patient may to have one or a lot of testing. Each such testing is encoded by date and time of the vote. For viewing of list with dates of patient's tests click the square left opposite patient's name. Under the name soon will see a list of diagrams of the patient. These lines coded date and time of the test. If there is square left opposite the test's date, then this testing for this date was conducted by DSD-test and, consequently, has a lot of second-by-second diagrams. To open a list of second-by-second diagram must click on the square in front of the date of DSD-testing. By default, always the first line of code "+" is active in this list. Always, if a list is not removed in the window that the slider to scroll through the list appears to the right.

   If you click on the date of a Nakatani chart or second of DSD-diagram, then this diagram became current-active at this moment working with the program, and that it will be shown in all graphs, and diagnose text, phantoms and treating recipes will be based on it.

   There is a compression and expansion options for viewing archival list of patients. The default, compressed version is set for the viewer always. At any time users can activate an extended version and vice versa. To do this, simply double-click the mouse on the word "Patients" over the list of patients (🧑‍🧑 **Patients**).

   In the extended version of the list of patients there are additional columns (fig. 7.1) the right of the names of patients. There is information about the patient's sex, code (here you can write, edit and delete this code), date of birth in these

additional columns. In addition, if you click on the [A] icon, then "Case history of the patient" was opened on the screen.
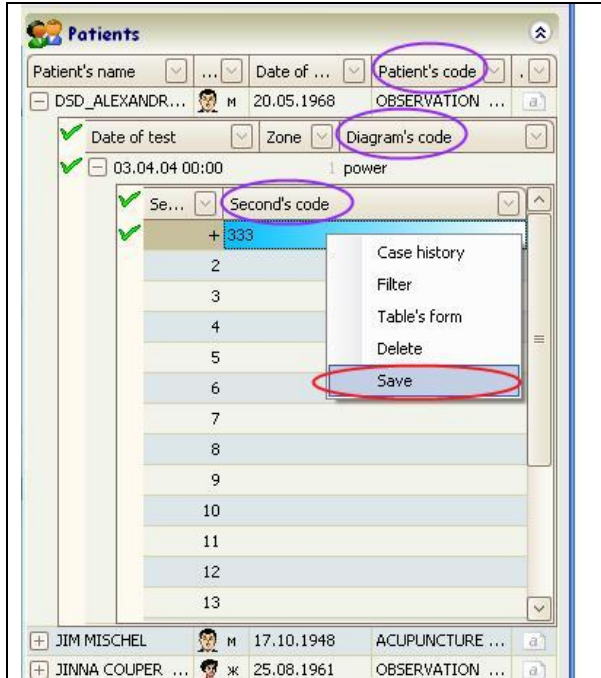
If the expanded version display a list of testing, there is "Zone" code in the column "Zone" at the right of the date of each test (this code is activated automatically after a testing): 1 - Testing the distal zones 7 - a test of the thoracic spine, 8 - test of the cervical and lumbar; 9 - Test vertebral-motor segments, which include the arteries to the spinal cord. There is a column "Diagram's code" after "Zone" column. For DSD-diagrams only there is a special "Second's code" column after "Sec.–*by-sec*." column in an expanded version of archive.

You can write, edit and delete the corresponding "Diagram's code", "Patient's code" and "Second's code". For it write the necessary code, press <Enter>, click to this line in the screen by a right key of mouse and click to the "Save" in the table.

Such detailed coding of chart is necessary for scientific activity.

Close the lists can be re-clicking on the appropriate squares.

As stated above you can view "**Case history of the patient**" by clicking on the icon [A] at next to the name of the patient, in an expanded version of the archive viewer. Also you can activate viewing of "Case history of the patient" in a compressed version view a list of patients. Place the cursor on the desired patient's name and click the right mouse button, a window appears, click on the "Patient's card" line. "Case history of the patient" will appear on the screen.

Also, a window with a "Case history of the patient" is always present in the "Test—Testing" bookmark below the info-window. You can open a "Case history of the patient" in separate window, for it double-click on the name of the window "Case history of the patient", then a Case history of the patient was displayed in big window. Only here you can edit information in a "Case history". After editing for saving of information click the <Save> button in down line. For printing of information click the <Print> button in down line. You may print information with editing or without. You may save a edited text or don't save it. As necessary, the doctor fills to a personal card necessary information about the patient. In addition, the program automatically enters the date and time of tests performed and carried out electropuncture procedures to a Case history of the patient.

7.2.   How To Delete Information From Archive

Information from the archive can be completely deleted - this procedure is in the "Service—Archive's service—Delete current archive" bookmark.

You can delete information on any patient with all his tests. To do this, place the cursor on the desired patient's name and click the right mouse button. A window opens on the screen, here click the "To delete.." line. Warning window appears - confirm your desire to click «OK».

You can delete information about some of his diagrams. To do this, the respective list, click the right mouse button over the correct line - a window opens where clicks the line "To delete..". Warning window appears - confirm your desire to click «OK».

Remember! If the patient is deleted from the archive, all his measurements are automatically deleted at the same time.

7.4.   Archive's service

"Service—Archive's service" bookmark should be activated for archive repairing.

Print the list of patients from the archive. Before printing, you can filter the list for your selected criteria in the "Patients table", and only then click "Print".

Activate the *"Service—Archive's service—Connection of other archive" bookmark* for change your current-active archive. You may to connect another archive's files to your current-active archive or to change your current archive with another archive.

The First, active the circle in front of the archive with dbf-files (from the old version) or the mdf-files (from the new version of the program). Then select and activate a necessary variant for you. Then click <Execute> button in down line. Waite and process of changing of archive will be finished soon. Look at the list of patients. It will be changed.

Activate the *"Service—Archive's service—Reserve copying of archive to other drive" bookmark* for creating a backup archive of the program. First, decide you need to create this copy: once now, or let the program will automatically create a backup copy with a certain periodicity. To do this, activate the necessary right circle in the "Frequency" box (line «none» is for single-copy archive). Click the button <Execute>.

Next, open the window, which will determine the directory where it will be posted a copy of the archive. Click <OK>. You can always upload this copy of the archive to any computer with our "POINTS" program and work with this archive.

8.   OPTIONS OF "POINTS" SOFTWARE

Our complex is provided with the maximum of functional possibilities supported by its software. All settings, which you are allowed to use, displayed in the "Service—Options" bookmark. If the word «True» is the front line - it means that this function is activated, and if «False» -- then locked. Click on <Save> or <Apply.. *only for the current session>* button in the down line after editing the settings. Sometimes it is useful after saving for permanent use restart the program.

8.1.   Miscellaneous

8.1.1. There is address of a directory for copying of your archive in the "Backup copy of a database" line. You may to change this directory in this line.

8.1.2. There is address of Web-site for automatic update program in the "Source of program's updating" line. For such automatic updates just click on the button <Web> on the upmost line of the screen and then click on "Update" line.

8.1.3. The function in "To show at start the Testing's page" line is described in the beginning of this Manual in the section "Initial Start of "POINTS" Software" (command «True» - the "Test--Testing" bookmark is activated after start the program; team «False» - the name of the complex displays after start the program, and then you activate the desired tab).

8.1.4. The function in "Use the registration extended data" line is described above under "Register patient" (command «True» - at the time of registering a new patient is installed version of the extended data automatically; command «False» - at the time of registering a new patient is set a shortened version of the input data automatically - only the name, date of birth and sex of the patient).

8.1.5. The "Current printer" line - here you can select the printer for printing in the program (for example, a virtual printer rather than real). The program takes a list of printers from your WINDOWS.

8.5.   Customizations of mapping

8.5.1. The ***"The Zone of testing"*** line. If you activate this option, the special window will be opened and you may to select necessary test's zone from a list. Click on the name of this zone. Then save the settings.

List of zones for testing:

1/1. Distal zone # 1 is selected by default after the installation program for testing of morphofunctional systems).

2/1. Distal zone # 2 is zone for "entry pathogenic bioclimatic energy" into organism. According to the theory of traditional oriental medicine there is a first responds to the pathology of the meridians in the skin of these points.

3/1. Distal zone # 3. This set is included in the list of representative items for historical reasons.

4/1. Distal zone # 4, there is zone Ki.4 instead of the corresponding to the zone Ki.3 for testing of "Kidney" system (information is from primary sources).

5/1. List # 5 is paravertebral acupoints (only for DSD-method).

6/1. List # 6 is MO-points (in progress).

7/2. Thorax vertebra. Zone output posterior branches of spinal nerves of the thoracic spine.

8/2. Cerv.-Lumb. vertebra. Zone output posterior branches of spinal nerves Cervical and lumbar spine.

9/2. Enters of arteries. Zone output posterior branches of spinal nerves that make up the neurovascular bundles along the main arteries for supplying the spinal cord.

You can go to test after activating of the correct zone in the settings. After testing it's results in the archive will have the code by number of the zone from this list.

If you ever want to see these results from the archive, then the code will let you know - what specific zones were then tested, and then you activate the program for testing precisely these zones, and view test results from the archive in this program . That is, if the testing was made on paravertebral zones of the thoracic (zone's number 7 in the list), then interpret this result should be in the program for testing precisely these zones with number 7.

Be careful! You can view a code testing's zones in an extended version of archive's list in the column "Zone" (see fig.).

8.5.2. The ***"Transcription of meridians"*** line. The program allows you to view system names and points in different transcription, adopted at different times and in different countries varied. You can use English (EN), French (FR), Germany (DE) and NN (short notation using numbers in the order of the daily cycle of activity of the classical meridians, back-median meridian has the number XIII, and front-median = XIV).

There is a transcription meridians according WINDOWS language after the installation of program, the default. You can change the transcription of the meridians of your choice in any time!

8.5.3. The **"Used language"** line. There are many languages for work in program. The program allows users to work in their native language. Number of languages in the program is constantly growing. Activate this option, a special window appears, and select your preferred language. There is a language according WINDOWS after the installation of program, the default. You can change the language of your choice in any time!

8.5.4. The "**To show all measurements**" line. If this line is «True», you view patient's names in archive list only with Zone's code according current zone's program and without patient's names with other Zone's codes. For example, if you activated the program for testing the 7th of paravertebral zones, the screen will not be displayed patients names in archive's list, who was tested by program from the 1st to 6 th and from the 8th to 9th. If this line is «False», you view patients names in archive list with all Zone's codes.

8.6. Parameters of testing

8.6.1. The "**Autocompletion of a measurement**" line. Typically, there is no need for users to deactivate this function.

8.6.2. The "**Duration of testing, sec"** line. If there is "3" sec in this line, it means that Nakatani test will be active for work after opening "Test—Testing" bookmark by default, but user cans change this function before registration of patient in "Test—Testing" bookmark manually. If there is "60" sec in this line, it means that DSD-test will be active for work after opening "Test—Testing" bookmark by default, but user cans change this function before registration of patient in "Test—Testing" bookmark manually. Indicator "300" is used for Scientific activity.

8.6.3. The "**Voltage, volts"** line. If there is "12" V in this line, it means that voltage of test current will be 12V after opening "Test—Testing" bookmark by default, but user cans change 6V before registration of patient in "Test—Testing" bookmark manually. If there is "6" V in this line, it means that voltage of test current will be 6V after opening "Test—Testing" bookmark by default, but user cans change 12V before registration of patient in "Test—Testing" bookmark manually.

8.7. The device

8.7.1. The "**Driver**" line. You selected the driver for your device at first start of program. The name of your chosen driver indicated in this line. If you need to change the device driver (often when configuring the device POST-12.2), then enable this line and select the driver.

8.7.2. The "**Port"** line. Your device is connected to your computer by this port. Your device has a adapter USB-COM, so port's name in this line is COM with some number.

8.7.3. The "**Demo mode**" line. There is "True" in this line if you have not registered the program.

8.7.4. The "**File musical accompaniment**" line. There is possibility to use musical accompaniment during the DSD-test. Here you can select the music file that will run at the beginning of the DSD-testing automatically. If you want to add to the **file *.mp3**, then copy its to the DSD\SOUND directory, and you can activate one of its in this configuration line.

8.7.5. The "**Musical accompaniment"** line. Automatic start playing of music is defined by «True» in this line.

You can always turn off and re-start the music (On/Off button music is in the top of the configuration settings in the "Testing" bookmark and it is available during testing procedures). Automatic start playing of music is blocked by «False» in this line.

8.8. Diagnoses

8.8.1. The **"To show emotions"** line. When you view the text of diagnostic conclusion in *"Diagnosis—Diagnoses"* bookmark program allows to give information by interpretation of the emotional background at the end of diagnoses.
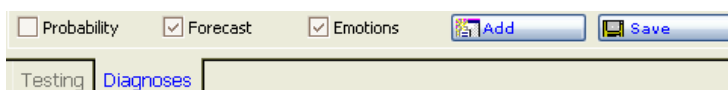
There is "Emotions" square in the command down line. Activation of this square allows to show text of the emotional background.

If there is "True" in the "To show emotions" line, it means that the "Emotions" square will be activated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans deactivate this square manually. If there is "False" in the "To show emotions" line, it means that the "Emotions" square will be deactivated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans activate it manually.

8.8.2. The **"The expanded diagnoses"** line. *Today this possibility is only Russian "POINTS" version.* When you view the text of diagnostic conclusion in *"Diagnosis—Diagnoses"* bookmark program allows to give more information by

interpretation of test's result for current patient. If this option is not needed, it is necessary to deactivate "For patients" square in the command down line of this bookmark. And so the activation of this square should be for viewing of expanded version of diagnoses on the screen.

If there is "True" in the "The Expanded diagnoses" line, it means that the "For patients" square will be activated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans deactivate this square manually.

If there is "False" in the "The Expanded diagnoses" line, it means that the "For patients" square will be deactivated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans activate this square manually.

8.8.3. The "***Calculation of probability***" line. . When you view the text of diagnostic conclusion in *"Diagnosis—Diagnoses"* bookmark program allows to give more information by interpretation of test's result for current patient with percentages of a diagnostic conclusion. This option is possible for a Nakatani diagram or for one diagram of DSD-test. It's corresponding line *(except for a line with a code "+", as this line is for comparison of diagrams with codes "3" and "255")* in the second-by-second archive list of diagrams should be activated. If this option is not needed, it is necessary to deactivate "Probability" square in the command down line of this bookmark. And so the activation of this square should be for viewing of percentages of a diagnostic conclusion on the screen.

If there is "True" in the "Calculation of probability" line, it means that the "Probability" square will be activated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans deactivate this square manually.

If there is "False" in the "Calculation of probability" line, it means that the "Probability" square will be deactivated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans activate this square manually.

8.8.4. The ***"To show the forecast"*** line. When you view the text of diagnostic conclusion in *"Diagnosis—Diagnoses"* bookmark program allows to give more information by interpretation of test's result for current patient with a forecasts. If this option is not needed, it is necessary to deactivate "Forecast" square in the command down line of this bookmark. And so the activation of this square should be for viewing of forecasts with diagnostic conclusion on the screen.

If there is "True" in the "To show the forecast" line, it means that the "Forecast" square will be activated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans deactivate this square manually.

If there is "False" in the "To show the forecast" line, it means that the "Forecast" square will be deactivated after opening "Diagnosis—Diagnoses" bookmark by default, but user cans activate this square manually.

8.8.5. The "***Show a bioelektromagnetism***" line. It is necessary in this configuration line set «True» for users who have registered in the feature functionality of the program. In this case you will have the opportunity to activate for viewing "Diagnosis—Bioelectromagnetism" bookmark and then you can use the software interpretation of test results from the position of the frequency characteristics of internal and external electromagnetic fields of biological organism.

9. ORIENTAL MASSAGE

This section includes software for using the oriental massage on the base of diagnostic results of trophic vegetative regulation of the skin and muscles.

The "Massage" bookmark should be activated for viewing recipes for massage. The program allows fore types of a oriental massage.

On the screen you will see a phantom of the head with red and blue lines on it.

When you activated the "Massage—Cosmetic Skin" bookmark, then a phantom of the head displayed. On this head's phantom you can see **skin lines** of the face, scalp, neck. It is the technique of cosmetic oriental massage the aim of which is to normalise trophic regulation of the skin on the face and scalp by influencing the nerve endings in the derma. The massage is conducted with fingers while applying cosmetic oils to the skin.

When you activated the "Massage—Cosmetic Muscles" bookmark, then a phantom of the head displayed. On this head's phantom you can see **tendon and muscle lines** of the face, scalp, neck. This technique of cosmetic oriental massage is for normalisation of trophic regulation of a mimic muscles by influencing the nerve endings. The massage is conducted along these lines by means of *a special biomechanical stimulator.*

When you activated the "Massage—Arms and …Legs" bookmarks, then a phantom of the arms or legs displayed. On this extremities phantom you can see **tendon and muscle lines**. To receive the image of the right extremities you activate the **"Right"** circle to return back to left extremities you are to activate the "**Left"** circle**.** This is a therapeutic variant of the Oriental massage for normalising the vegetative regulation not only in the extremities but also in the corresponding inner organs through influencing the nerve endings in tendons and muscles. The massage is conducted along these lines either manually or, as a rule, *with a biomechanical stimulator.*

1. Red colour of the line means that a stimulating massage should be conducted along this line while the blue colour means a sedative massage
2. The massage should be conducted along the lines shown on the phantom
3. The direction of locomotion of lines show the direction of the massage along the lines.

Automatically, when you activate some "Massage" bookmark, a corresponding phantom is rotated to the front of you. There are buttons turn control phantom on the right. Blue arrows in their activation command to rotate in one direction or another. But if you re-click on the blue arrow, rotation stops. All the massage's lines can be easily seen on scheme at different angles of rotation. The green arrows in their activation command to make a single turn in one direction or another.

To remove any lines from the screen, click with your mouse on the corresponding yellow buttons with line numbers on their left. By clicking the same button once again you can return the lines onto the screen. It can be convenient when a lot of lines are proposed for the massage and one can look through active lines on the phantom one by one.

Some phantom images with active massage lines on its can be printed. To do so, select the necessary image on the screen and click on the **<Print>.** Confirm your wish by pressing **<OK>** in the window, which appears then.

10. GRAPHIC MODELLING

10.1. How to Construct a New Model

Activate the *"Models—New model" bookmark*, then the window of the Programme "Creation of new model" with the list of patients from the current archive will appears on the screen. Look the corresponding instruction in upper lines of each step's window.

__Step # 1.__ If it is necessary define the group of patients and their measurements for building your model. Click on the square at right of column's name in the table. A special window will appear, where you have to specify criteria for selecting your group of patients.

Displayed of the screen now will be the list of patients selected according your criteria instead of the general patients' list.

After these criteria have been selected, click on the button **<Forward>**.

__Step # 2.__ A corresponding window will appear. The calculation completed, the table fields are filled with indices of prevalence for every sign (excess- norm-deficiency of the middle - right - left) **in percentage**.
Click on the button **<Forward>.**

__Step # 3.__ Next calculation completed, a window will appear displaying a preview of the model to be constructed. The range of this plot deviation from the norm depends on the incidence percentage for this sign in the testing patients' group.
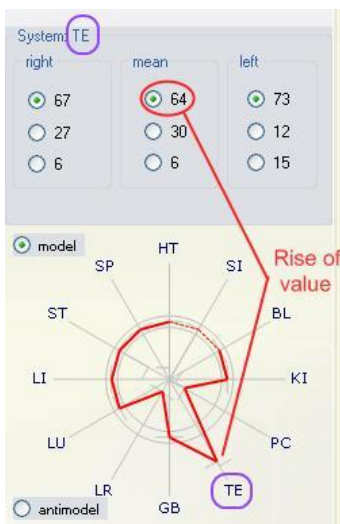
Now you have the possibility to correct the image of the model to be constructed, which is presented in the window. Click on the button with the name of the first channel "**Lu**" in the row of buttons placed in the line . Make sure that the table of incidence percentage placed above the model's image was titled **<System Lu>**. This table represents the **excess** percentage (upper red line), **norm** percentage (middle green line) and **deficiency** percentage (lower blue line) of the **right, middle and left** indices of the given channel ("Lu").

If you mind that the typical sign for the group to be tested is not the one, which is marked by the dot click with you button on the sign, which you personally find typical for the model. The dot mark will move to the field you have selected.

If you mind that changing of some index for this meridian is not typical for the group of patients to be tested, i.e. the incidence percentage is rather equally divided among excess-norm deficiency, you may even delete the mark for typical signs. In this case place the mouse arrow on the circle field where the dot mark is and click with the **right button of the mouse.** The dot mark for typical signs will disappear for this parameter. If you delete the dot mark at the middle index of the channel, the graphic line opposite the channel will become dotted.

So as you see it of the model plot the typical character of the right and left indices is shown as dashes on the ray of the corresponding meridian (if you look clockwise first goes the dash of the right and then of the left parameter), the line of the model 's plot goes through the typical dot of the middle parameter of the channel.

After you check the typical character of indices for meridian "Lu", start the same procedure for meridian "Li". Click with the mouse on the name of the meridian **"Li"** and check its deviation from typical indices. In this way you can check all the meridians.

__Step # 4.__ There is the report of this model on the screen.
The report will contain the following information (fig. 10.6):
- q model's **name**;
- q **number** of measurements used for constructing the model;
- q date and time of model's construction;
- q **criteria for patients'** selection from your archive;
- q table of incidence **percentage for excess-norm-deficiency** of the right-middle-left index of each channel;
- q list of **most prevailing signs** (those which were used in the calculation of combinations) and their incidence percentage;
- q **criteria** for selection **of combinations** (the first 30 most prevailing ones ore incidence rate from 35 till 65%);

most prevailing combinations of 2 signs and their incidence percentage;
most prevailing combinations of 3 signs and their incidence percentage;
most prevailing combinations of 4 signs and their incidence percentage;
most prevailing combinations of 5 signs and their incidence percentage.

Click on the button **<Forward>.**

Step # 5. You can name the model you have constructed. For this purpose you are to enter the model's name instead of "New Model" words into the "Name of model" line. Store the constructed and named model into the archive. For this purpose click on the button **<Save>** and you will return on a Step #1.
If you click on the button **<New>,** then you will return on a Step #1, but your model will not be saved.
The button **<Forward>** is blocked now.

10.2.   How to Construct an "Anti - Model"

This function is used in the case when the signs in the channels among the excess, norm and deficiency are divided so, that the typical sign is not the most prevailing but the least prevailing.

For example, the excess of the index is 45%, the norm - 50% and deficiency -5%. Typical in this case is that the index is not deficient.

To construct such an anti - model click on the word **<Antimodel>** under the plot and the dot mark will appear opposite this word on Step #3. All other steps for editing the plot and storing it into the archive are similar with those for a new model, the main difference here will be the fact that the least prevailing indices are recognised as typical.

10.3.   How To Work With Models' Archive

Activate the ***"Models—Work with models" bookmarks*** for enter to models archive. There are two table and two diagrams on the screen.

The upper table is archive list of patients diagrams. There are 10 columns in this table: 1) Percent of coincidence; 2) Last name; 3) sex; 4) Birthday; 5) Profession; 6) Code of patient; 7) Date of testing; 8) Code of diagram; 9) Code of second; 10) Second (second-by-second code). The cursor is in upper line, so there is diagram of this line to the right of this table. If you placed the cursor in this table on other line, then a diagram for this line appears to the right of this upper table.

The down table is archive list of models. There are 4 columns in this table: 1)Number of model; 2) Name of model; 3) Info; 4) Anti-model mark. The cursor is in upper line, so there is model of this line at right of this table. If you placed the cursor in this table on other line, then a model for this line appears to the right of this inferior table.

10.3.1.   How To Look Trough Graphic Model from Archives

Click on the name of the necessary model in the down table with archive list of models. The selected model will be displayed in the window to the right.   Click icon with "A" in this line (third column of this table) and in the window below you will see the registration data of this model (report of model).

To print the model image with the registration data click on the button **<Print>**.

To erase the information about any model from the archive, put the cursor on the models' list on the necessary name, press right key of mouse and click on the button **<To delete model>** in the appeared window.

10.3.2.   How To Compare Models From Archive

Put the cursor in the models' list on the name of the first necessary model. Then press the left button **<Ctrl>** on the keyboard and, keeping it pressed, click with your mouse on the name of the second necessary model. You will see the graphic image of the second model placed over the graphic image of the first model. If you press the left **<Ctrl>** button of your keyboard once again, and keeping it pressed, click with your mouse on the name of the third necessary model, there will be three differently coloured graphic images simultaneously on the screen,. In this way you can look through any number of graphic images. They are identified by colour.

To print graphic images of models in comparison click on the button **<Print>** while looking through them. In this case printing in colours is preferable.

To return to looking through graphic image of one model click with the mouse on its name (the left button <**Ctrl**> on your keyboard need not be pressed)

10.4.   How to Compare the Patients' Diagrams From Archive with Graphic Model Images from the Model Archive

To begin with this procedure you are to be in the *"Models—Work with models" bookmarks* of the screen.

Step No 1. If it is necessary define the group of patients and their measurements for comparing of their diagrams with model. Click on the square at right of column's name in the table. A special window appears, where you have to specify criteria for selecting your group of patients.

Displayed of the screen now will be the list of patients selected according your criteria instead of the general patients' list.

Step No. 2. Define the model for comparison with the patients' diagrams. Click on the model's name in down table.

Step No 3. To begin comparing the selected model with the diagrams of previously selected patients click on the button **<Comparing of patient's diagrams with the chosen model>** placed down the models list.

Automatically the list of patients will be arranged according to the criteria of maximal similarity of the patient's diagram with typical signs of the model in percentage. When the arrangement is completed, the list of patients will appear on the screen. The first names in the list will be the named of patients whose diagrams are most similar to the model and in the "Percent of coincidence" column the percentage of compatibility of signs in the patient's diagram with the signs of the model to be compared is indicated. There is line with percentage of comparing above the diagram at right upper window.

If you click to the line with necessary diagram's name in list of upper table and the click on the button **<Print>** in uppermost line of the screen, so this diagram and was printed by comparison with activated model.

If you click to the line with any diagram's name in list of upper table and the press right key of mouse, so a special window will appear and click the "Print of table" line, so list of diagrams from upper table will be printed.

Be attentive! If there were some measurements of this patient, his name will be repeated in the list. If the similarity percentage of these measurements will be the same, they will be side by side in the list, if the percentage is different, they will be in different places of the list.

10.5.   Examples of Applying "Graphic Modelling" Software

Example No 1.
Aim: to reveal typical changes in the functional systems in the group of patients who are influenced by certain noxious factors (professional harmful factors, environmental factors and so on) or who are suffering from the same pathology.

Step No 1. Decide what criteria you will use for selecting the group of patients from the general archive of patients. It can be their profession, for example *(assembly shop, operators and so on)* or their code *(here you give your patients their codes by yourself while you register them or from the patients' archive).*

Step No 2. Test the patients of the selected group. It is very important that the patients are under the same conditions at the moment of testing *(e.g. in the morning, on an empty stomach, without any medicinal influence on the organism and so on).* To construct a more precise model we advise to conduct some tests of every patient under the same conditions in a certain period of time (hours, one day or more).

Step No 3. If necessary, code the measurements used as a base for constructing your future model. These operations are conducted in the archive inside the table" date, time, code of measurements". If all the measurements of the patients to be tested will be used for constructing the model, there is no sense to code each of them, since such measurements will be coded by the absence of any code.

Step No 4. Enter the programme "Graphic Modelling" and conduct all stages for constructing a new model.

Example No 2
Aim: to define patients of the risk group according to a certain pathology (for example while conducting preventive examinations). It is very important for harmful production processes.

Step No 1. Create a model of typical deviations in functional systems for a certain pathology.

Step No 2. Test people undergoing a preventive examination.

Step No 3. Compare the obtained diagrams with a previously created model. You are to decide what diagrams (with what percentage of compatibility) will be included in the risk group of this pathology (it is advisable not more than 65-75% of similarity).

Example No 3

Aim: to find among future candidates for working in a certain shop those who are most adequate from the point of view of their health to such employment

Step No 1. Construct a model for typical deviations in functional systems characteristic of workers of such a shop.

Step No 2. Test all persons willing to work in the shop.

Step No 3. Compare testing diagrams of these persons with the model for typical deviations for workers of this shop. Select for work only those people whose diagrams are **the least similar to the model** as well as diagrams of those people whose health is in the most balanced condition.

Example No 4

Aim: to study the progress and character of changes in typical signs for a group of patients which take place as a result of some (medicinal or harmful) influence on the patients

Step No 1 Test the group of patients while they are influenced upon by the factor to be investigated. It is important that all the patients are under the same conditions in the moment of testing.

Step No 2 *Code the conducted m*easurements as control ones (it is advisable to use a code with number "O").

Step No 3. Influence on the patients' organism with the factor to be investigated. Usually it is a short or a prolonged (e.g. a course of procedures) action.

Step No 4. Code each similar measurement with the same code. E.g. you code your measurements with number "1" after the first procedure, after the second one you code them with number "2" and so on. If the number of procedures is different for different patients of the group, the last procedure of the course is to be coded with one code (e.g. with letter "f").

Step No 5. Construct the model of typical deviations for this group of patients on the base of control measurements, i.e. measurements before they are influenced upon. (e.g. code of measurements "0").

Step No 6. Construct the model of typical deviations for this group of patients after the first day of the influence (e.g. code of measurements "1"), then after the second day of the influence and so on. The last model is constructed on the base of measurements taken at the end of the influence of the course of influences (e.g. code of measurements "f").

Step No 7. Compare the models and estimate the progress and character of changes in typical signs for the studied group of patients after they were influenced upon by the factor to be investigated.

Example No 5

Aim: to reveal patients for which this or that medicinal procedure is indicated, for example, those procedures which improve the general condition of patients and contribute to increasing of life resources of their organisms

Step No 1 Construct models characteristic of this or that condition of the organism.

Step No 2 Test your patients.

Step No 3 Compare the patients' diagrams with the graphic image of the model to determine if the medicinal procedure to be administered is indicated.

12. POSSIBLE TROUBLES AND HOW TO ELIMINATE ITS

12.1. Device Cannot Be Connected to Your Computer

12.1.1. General information

If you first started the programme POINTS with the device connected to one of the COM-ports or USB-ports of your computer and, in case of the "Peresvet" device, also connected to the Electricity, then ideally there is "Connection to the port COM….OK!" in upper right window of "Test-Testing" bookmark.

That means that the programme realised the connection between the necessary device and your computer and the device is ready for further work. If there is "Connection to the port COM….Error!" in upper right window of "Test-Testing" bookmark, so it means that the programme fails to connect the device and your computer. The causes of it may be as follows:

1) "Peresvet" device is not connected to the Electricity (the indicator on the front board of the device does not burn)
2) Device is not connected to the computer port
3) Device is connected to computer port COM-1 and the programme is set up to connection with COM 2 (or vice versa)
4) Connecting cable between the device and the computer is defect
5) Computer port is defect
6) Device output for connecting the device to the computer is defect

12.1.2. Device Is not connected to computer

In this case check the connection of the device itself to the COM-port or USB-port of your computer and to the Electricity in case of the "Peresvet" device (an indicator must burn on the front board of the device).

12.1.3 Programme is set up to computer port out of work

In this case the device may be connected to COM-1 and the programme set up to COM-2 or vice versa. If there is a possibility, connect the device to the other port. If you cannot do so (this port may be occupied by some other device) you must set up your programme to the necessary computer port.

In rare cases your programme might have activated the driver of the wrong device. Be attentive and look what device's name is in upper right window of "Test-Testing" bookmark. In case the name does not coincide with your device, the driver of the device must be changed in the programme.

To change the set-up parameters of the device connection to the computer and to change the driver of the device you can do in "Service—Options—07.The device" bookmark.

12.1.4 Device can not be connected to computer by any means

If you cannot connect your device by any means, having tried all the ports available on your computer, all types of cables and adapters between different computer types, try to load this programme on some other computer and check the connection in this case. If the device is working on the other computer, probably your Com-port needs repairing *(even if the mouse works in this port it does not mean that all contacts of these port work, since the device uses other contacts than the mouse).*

If the indicator of the diagnostic/treatment device burns when you connect the device to the mains, but the programme fails to connect the device with any ports of any computers, you are to check the output of the device on the rear panel (this work is to be done by the producer).

12.2 Cursor Jumps From Field To Field During Testing Without Your Command

This situation can be caused by the fact that the handle of the active electrode is not wiped dry after the cotton wool was soaked with isotonic solution. Because of this the following circuit is closed: contact plate inside of the ebonite cup + wet cotton wool + **isotonic solution of the handle of the active electrode!!!** + physician's hand + patient's skin + passive electrode.
The handle of the active electrode must be dry!!!

If you put the electrodes isolated from each other on a dry surface, the cursor must stop jumping, if it is not the case, the reason is the fact that the Com-port of your computer (mostly of your Notebook) has too low voltage which is not enough for working with the device. In this case you are to apply to producers, this situation can be improved by means of special adapters.

12.4. Device Adjusted for "Closed" But 200 mA Is Not Available

If you adjust your device for "Closed", but do not receive 200 mkA even if you re-adjust it, check if the metallic contact on the ebonite cup of the active electrode is clean. This metallic contact, being often used, accumulates salts of sweat glands and the accumulations can be big enough not to let the testing current pass. Screw the head of the active electrode and clean the contact with very fine sand paper.

!!! If you clean this metallic contact with cotton wool soaked in ethyl alcohol (70°) daily after work, there will be no accumulations on it.

Notes!

POINTS DEVICE
"BIODAR-V"

Treating-diagnostic's electrod (red)

Passive electrod (black)
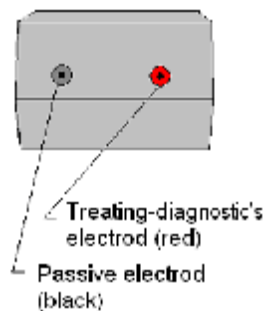
14.   THE FREQUENCY CHARACTERISTIC ELECTROMAGNETIC INFORMATIONAL FIELDS

The "Dianosis—Bioelectromagnetism" bookmark should be activated for viewing interpretation of condition of bioelectromagnetic fields for current patient.

Click the necessary patient's name and necessary date of testing in archive list to the right of the screen.

For looking of **external** fields of this patient - press a key <External BEM> in down command button of this bookmark. Press a button "Print" in uppermost line of the screen for printing of this plan.

For looking of **inernal** fields of this patient - press a key <Internal BEM> in down command button of this bookmark. Press a button "Print" in uppermost line of the screen for printing of this plan.

### 14.1   The frequency characteristic of external fields (Aura)

There are six frequency characteristics of **external** electromagnetic fields. Each frequency characteristic has two directions from a zero line - negative and positive or IN and JAN, according to traditional east medicine. All frequency characteristics have the name according to the classification accepted in traditional east medicine: fire-heat (red color in a drawing), fire-warm (orange color), the ground (yellow color), metal (grey color), water (dark blue color) and a wood (green color). Among experts such field wears the name of the Indian concept "**aura**".

Prevalence of this or that frequency is displayed in the central drawing in the form of color rings around of the standing person (for example, a normal condition is showed in figure). Presence of such color ring in an external field specifies that the given frequency has dominating influence at this person. Thus, the more force of such influence, i.e. the peak characteristic of frequency, the rings is more and its are removed on periphery of a drawing. If an external field very decreases it practically is about an integument of the person.
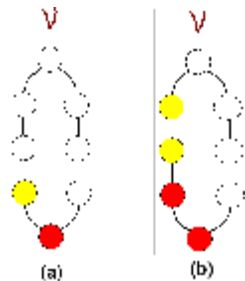
Also we can look prevailing frequency on the special plan to the right of the image of the person in the form of the color circles located one after another on an oval and bridged by a line. Thus color designates concrete frequency, presence of one circle of the certain color speaks about prevalence only to one polarity at this frequency (' + ' or '-', fig. a) what particularly polarity can be specified on the plan of an internal electromagnetic field of the person and if is present two circles of one color it means, that there is a full prevalence of corresponding frequency, i.e. ' + ' and '-' characteristics (fig. b).
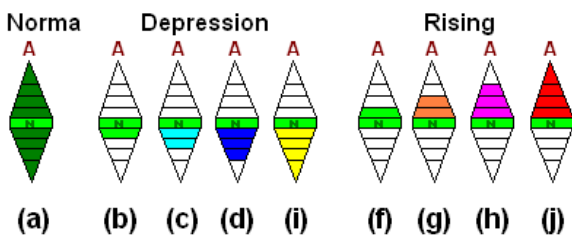
To the left of the image of the person the plan of the peak characteristic of an external field is given. The plan represents two triangles, referred upwards and downwards and parted everyone on four sectors. If amplitude of an external field is in norm, all sectors at two triangles have dark green color (fig. a).

Depression of amplitude of an external field is displayed by painting of sectors of the bottom triangle, thus:

1) Insignificant depression of amplitude is displayed in the form of painting the first sector from the center in light green color (fig. b);

2) The failure of amplitude of an external field of the first degree is displayed in the form of painting two sectors from the center in blue color (fig. c);

3) The failure of amplitude of an external field of the second degree is displayed in the form of painting three sectors from the center in dark blue color (fig. d);

4) The failure of amplitude of an external field of the third degree is displayed in the form of painting all sectors in yellow color (fig. i);

Rising of amplitude of an external field is displayed by painting of sectors of the top triangle, thus:

1) Slight increase of amplitude is displayed in the form of painting the first sector from the center in light green color (fig. f);

2) Redundancy of amplitude of an external field of the first degree is displayed in the form of painting two sectors from the center in orange color (fig. g);

3) Redundancy of amplitude of an external field of the second degree is displayed in the form of painting three sectors from the center in lilac color (fig. h);

4) Redundancy of amplitude of an external field of the third degree is displayed in the form of painting all sectors in red color (fig. j);

14.2   The frequency characteristic of an internal fields (Chakrs)

All six frequency characteristics have the name according to the classification accepted in traditional east medicine: fire-heat, fire-warm, ground, metal, water and wood. Zones of concentration of fields of various frequency characteristics are displayed on a body of the person in front and behind. Among experts such zones wear the name of the Indian concept «Chakrs».
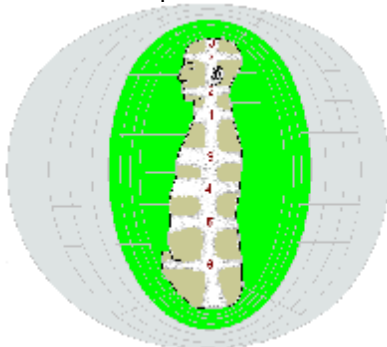
In a drawing of the sitting person levels of local concentration of various fields are specified. Each frequency characteristic is displayed in the form of 7 sectors located in front and 7 sectors, located behind. Thus characteristics of negative polarity of a field are in front displayed, and its of positive polarity are in back displayed (for example, it is norm in figure):

1) At a level of a thymic gland - the characteristic of "wood" frequency or a wind's chakr - (Anahat);

2) At a level of a thyroid gland - the characteristic of "fire-warm" frequency or a warm's chakr (Vishuth);

3) At a level of a pituitary body - the characteristic of "fire-heat" frequency or a heat's chakr (Adzhn);

4) At a level of a pancreas - the characteristic of "ground" frequency or humidity's chakr (Manipur);

5) At a level of adrenals - the characteristic of "metal" frequency or dryness's chakr (Svadhistan);

6) At a level of testicles and ovaries - the characteristic of "water" frequency or cold's chakr (Muladhar);

The level «**S**» is a level of applying of all frequencies of an internal field and it corresponds to a solar plexus or solar's Chakr (Agny)

The level «**I**» is a level of applying of all negative directions of all frequency characteristics and it corresponds to soles (Ki.1).

The level «**J**» is a level of applying of all positive directions all frequency characteristics and it corresponds to a vertex of a head (GV.20).

Below the description of rules of painting of sectors of each frequency characteristic is given.

If amplitude of the given frequency characteristic of the certain polarity is in norm, so four sectors, including from the center, opposite to this chakr are painted in green color (for example, this condition is for negative and positive directions of 'S' chakr in figure).
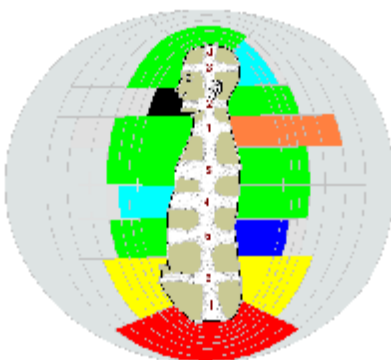
Depression of amplitude is displayed by painting of sectors opposite to this chakr:

1) The failure of amplitude of the first degree is displayed in the form of painting three sectors from the center in blue color (for example, this condition is for positive directions of '4-th' chakr and for positive directions of '3' chakr in figure);

2) The failure of amplitude of the second degree is displayed in the form of painting two sectors from the center in dark blue color (for example, this condition is for negative directions of '5-th' chakr in figure);

3) The failure of amplitude of the third degree is displayed in the form of painting the most internal sector in black color - «a black hole» (for example, this condition is for negative directions of '2-nd' chakr in figure);

Rising of amplitude is displayed by painting of sectors opposite to this chakr:

1) Redundancy of amplitude of the first degree is displayed in the form of painting five sectors from the center in yellow color (for example, this condition is for negative and positive directions of '6-th' chakr in figure);

2) Redundancy of amplitude of the second degree is displayed in the form of painting six sectors from the center in orange color (for example, this condition is for positive directions of '1-st' chakr in figure);

3) Redundancy of amplitude of the third degree is displayed in the form of painting all sectors in red color (for example, this condition is for 'In' chakr in figure);

Press a button " Print " in the right top angle of the screen for printing of a plan.