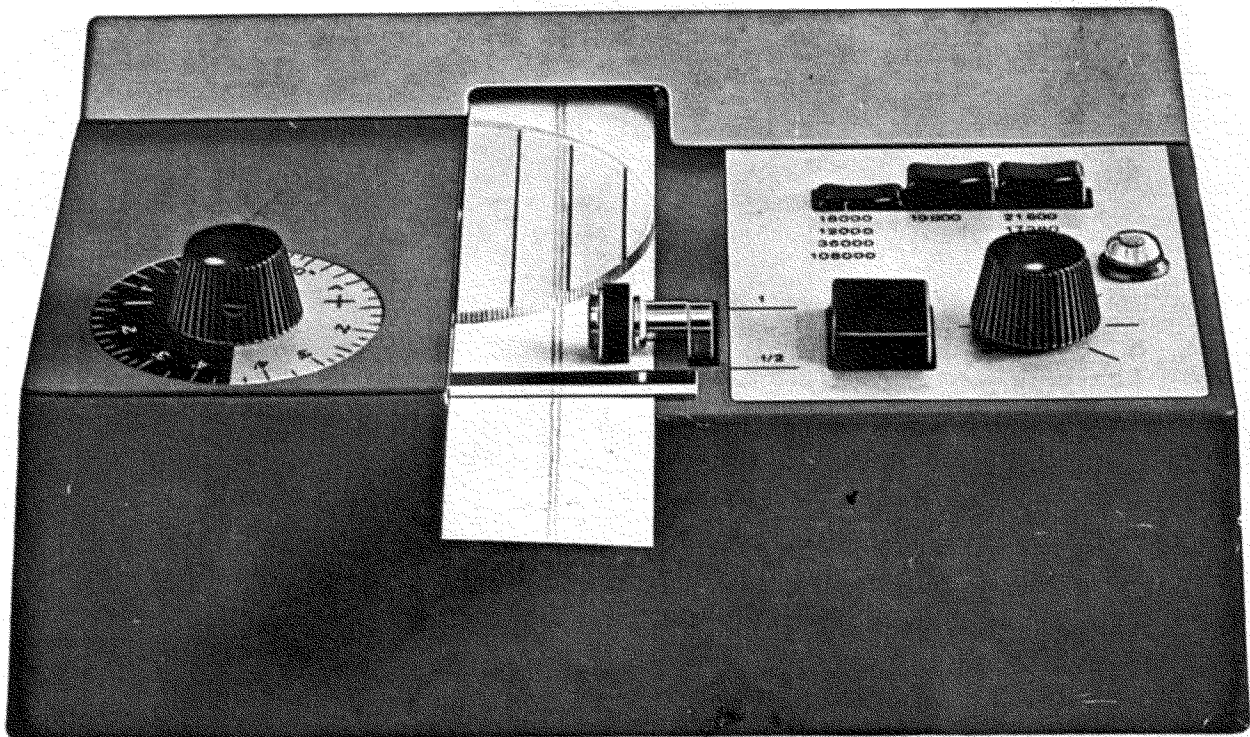


# vibrograf<sup>®</sup> B 100

Instructions for putting into operation, proper use and maintenance

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**Before starting the machine**

- 1 check the voltage selector
- 2 check the ink ribbon
- 3 Insert the roll of paper

When these steps are completed plug in the microphone and the current line.

For explanations of the control panel (front) see fig. 4.

**To check the voltage selector position**

Make sure that the voltage selector is in the correct position and corresponds to the line voltage (in case of doubt ask the electric company).

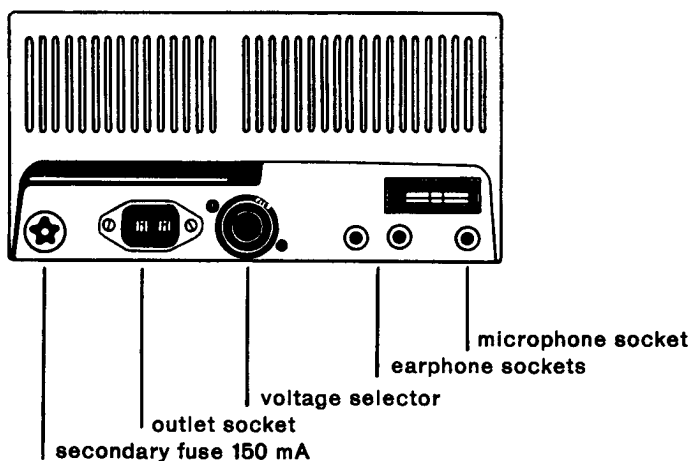
**To change the voltage selector**

Unscrew the button in the center of the voltage selector position. Rescrew the button.

Inside the button is a fuse. This fuse has a diameter of 5 mm and a length of 20 mm, or DIN 45571/46688 or SNV 24480. The fuse to be used depends on the line voltage as follows:

110 – 125 volts	1 A
220 volts	0,5 A

Fig. 1



## Installing the ink ribbon

It is best to change the ribbon when one of the ribbon spools is almost empty. In any case, first remove the roll of paper.

### Removal of the ink ribbon

Remove the retaining ring from the axle of the spool with a small screwdriver, then hold the left spool with the left hand and the right spool with the right hand. Hold the two spools as shown in fig. 2.

Hold the ribbon taut exactly as shown in fig. 2 and let it slide out of its guide track.

Roll the slack ribbon onto the spool with the most ribbon and remove all ribbon from the other spool.

### Installing the new ribbon

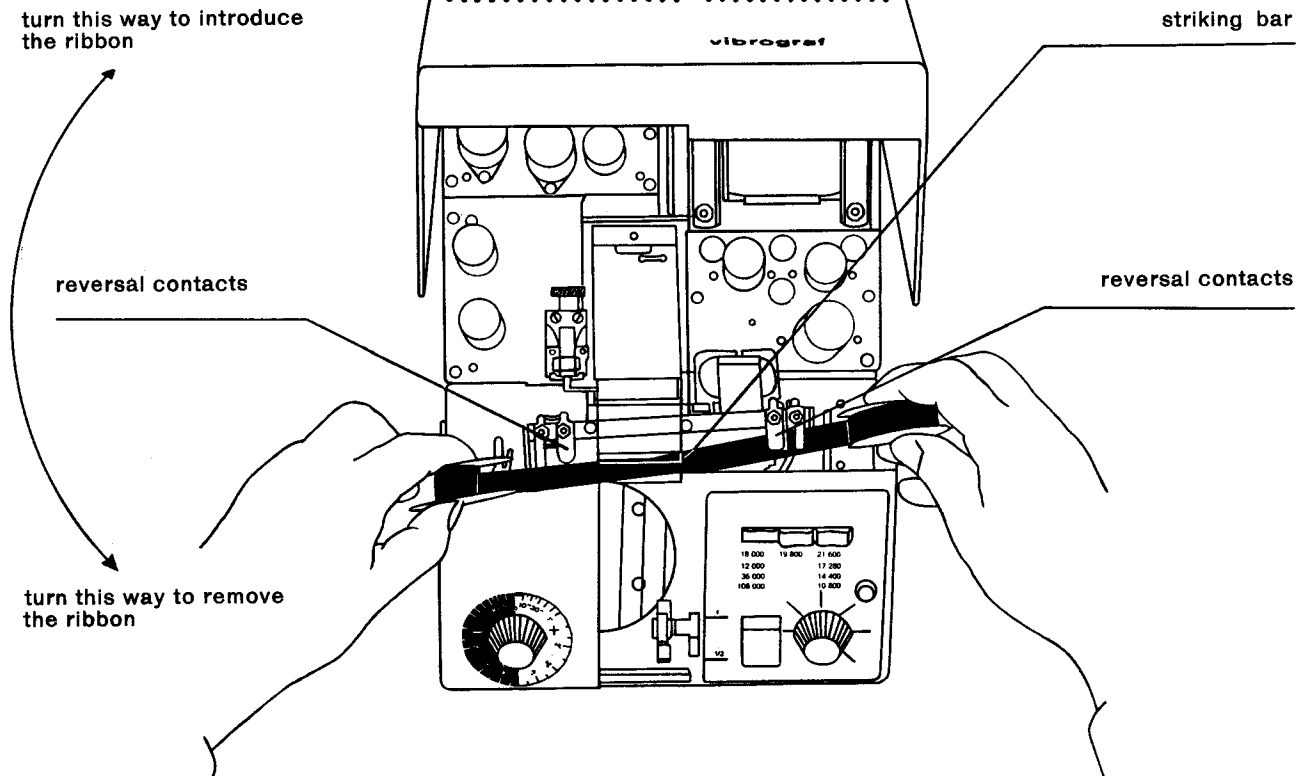
Fix the beginning of the new ribbon on the empty spool. Roll it a few turns making sure that the ribbon would unroll from underneath. Take hold of both spools and hold the ribbon taut exactly as shown in fig. 2. Introduce the ribbon under the striking bar and under the two sets of contacts located on both sides of the guide track as in fig. 2.

Place each spool on its axle making sure that they are properly in position. Replace the roll of paper.

### Note

The automatic reversal of the ribbon is done electro-magnetically. To insure that this operation is performed smoothly it is necessary to clean the contacts regularly by inserting a thin sheet of paper between them. It is not necessary to disconnect the machine for this, as the current on the contact, is only 10 volts.

Fig. 2

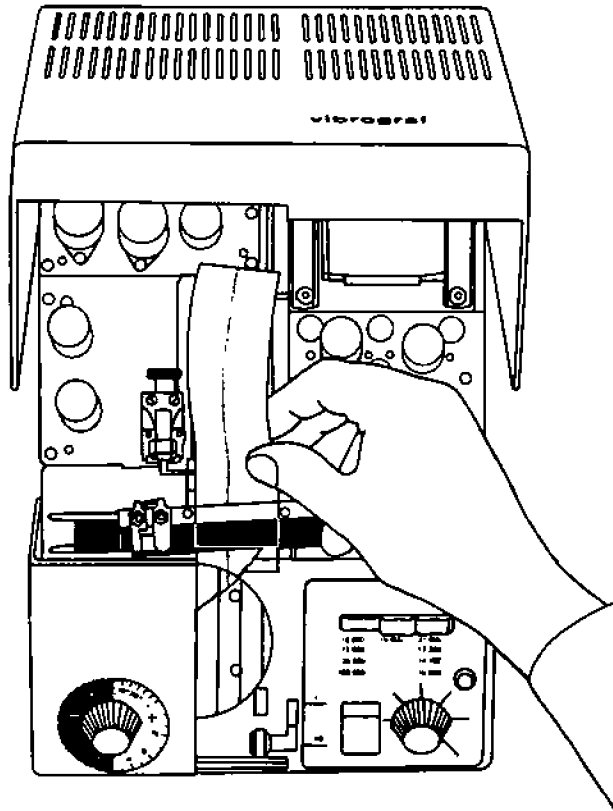


## Inserting the paper roll

For easier insertion cut the beginning of the tape on an angle as shown in fig. 3. Put the roll of paper on the spindle and put the roll into position, making sure that the paper unrolls from underneath. Slide the paper tape into the striking mechanism as in fig. 3. Lead the paper under the transparent reading disk and then under the moving lever by lightly pulling the lever between position 1 and  $\frac{1}{2}$ . Make sure that the paper passes underneath the paper-guide.

For easier insertion cut the beginning of the tape on an angle as shown in fig. 3. Put the roll of paper on the spindle and put the roll into position, making sure that the free end of the paper emerges from the top of the roll. Slide the paper tape into the striking mechanism as in fig. 3. Lead the paper under the transparent reading disk and then under the moving lever by lightly pulling the lever between position 1 and  $\frac{1}{2}$ . Make sure that the paper passes underneath the paper-guide.

Fig. 3



## To start the machine

Place a watch on the microphone. To start the machine, turn the volume control knob 1 to the right until you hear a slight noise. Wait for 15 seconds.

Push one of the three buttons — 18 000, 19 800 or 21 600 — corresponding to the beat of the watch being tested.

Put the paper lever (fig. 4 no 2) at the desired speed, either 1 or  $\frac{1}{2}$ .

**Push down the starting button (fig. 4 no 3) until the paper begins to roll.**

To control volume turn knob 1 to right.

## Note

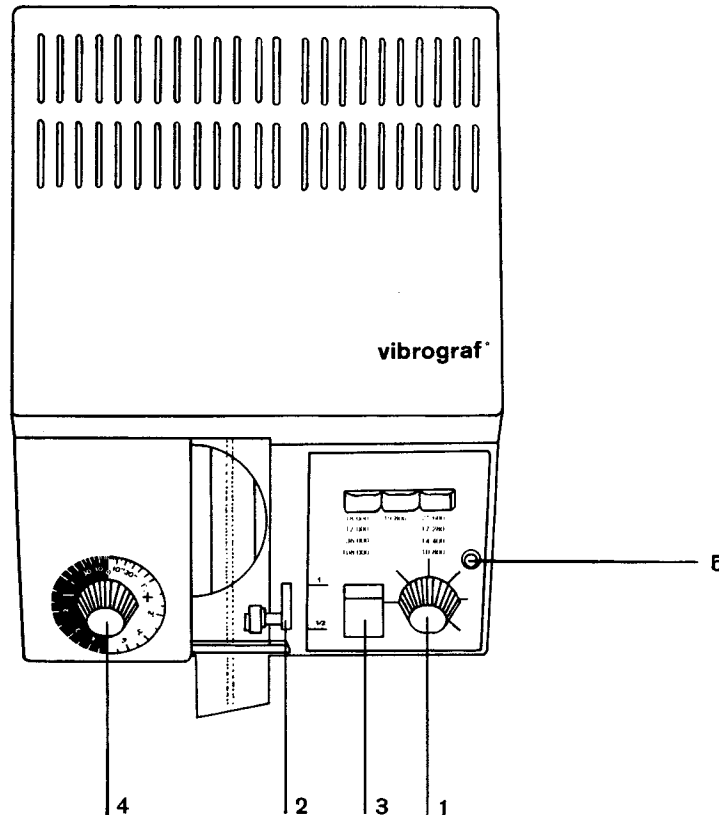
The vibrogram may zig-zag slightly and the beat indication may appear excessive. This means that the amplification is insufficient. Increase amplification until it is sufficient to get a good reading. For all supplementary indications please refer to the booklet delivered with the Vibrograf on methods of timing watches.

The knob 4 controls the reading device. When the lines on the transparent reading disk are parallel with the vibrogram on the tape, then the rate of the watch over 24 hours is clearly indicated on knob 4.

When the speed control lever is at position  $\frac{1}{2}$ , the rate shown on knob 4 is twice the actual reading.

To stop the printing, press lightly on button 3.

Fig. 4



#### Operational troubles

**Symptoms:** the pilot-lamp does not work and the motor does not run when the starting button is pushed down

the motor runs when the starting button is pushed down but stops when it is released

the motor runs, but the diagram is confused; the striking bar, however, is regular

**Remedies:** make sure the line current is correct

check the condition of the line cord

check the two fuses

check that one of the push buttons is pushed in

change tubes EL84 [6BQ5] (fig. 5 nos 1 and 2)

the wrong beat has been selected; check this by timing a watch whose reading you are familiar with

if the verification fails, change tube ECC81 [12AT7] (fig. 5 no 3) and, if necessary, tube ECF 2 [6U8] (fig. 5 no 4)

**Symptoms:** the motor runs, the paper moves, but the striking bar does not work

**Remedies:** listen with the earphone and raise the amplification to its maximum

if the noise of the watch cannot be heard, change tube ECC 81 [12AT7] (fig. 5 nos 5 and 6)

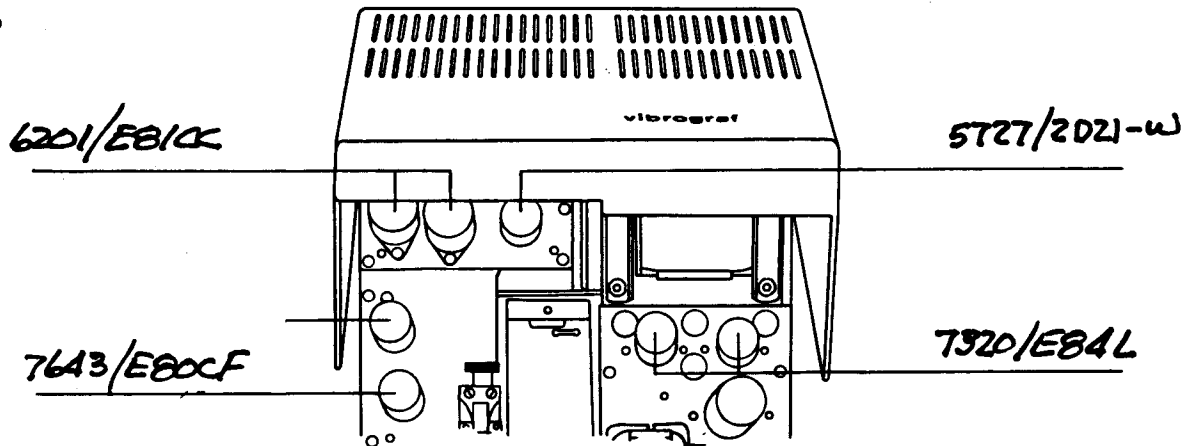
if this change has no effect, check the microphone wire

if there are no breaks in the microphone wire, this means the microphone is defective and it should be changed

change tube PL 5727 [5727] (fig. 5)

no striking, but the noise of the watch can be heard with the earphone

Fig. 5



## Maintenance

All moving mechanical parts operate on self-lubricating bearings; oiling, is therefore not required and would, in fact, be harmful to the machine. If, after several years of intensive use, the machine becomes noisy, it should be returned to one of our service centers for overhauling.

## Advice

Your Vibrograf B100 will give you many years of service if you observe the following points:

- use only original Vibrograf paper
- do not cover the machine while it is running

## Interpretation of readings

Please refer to the Vibrograf booklet on methods of regulating delivered with each machine.

## Guarantee

All Vibrograf machines and microphones are guaranteed against all defects in material and manufacturing for a year from the date of purchase, provided that the machine has been operated correctly.

## Regulation of printing intensity

The Vibrograf B 100 is equipped with an adjustable striker coil

To modify the printing intensity do as follows:

Printing too heavy: wind the knurled knob in AB direction

Printing too light: wind the knurled knob in AC direction  
this adjustment has to be made while the apparatus is recording

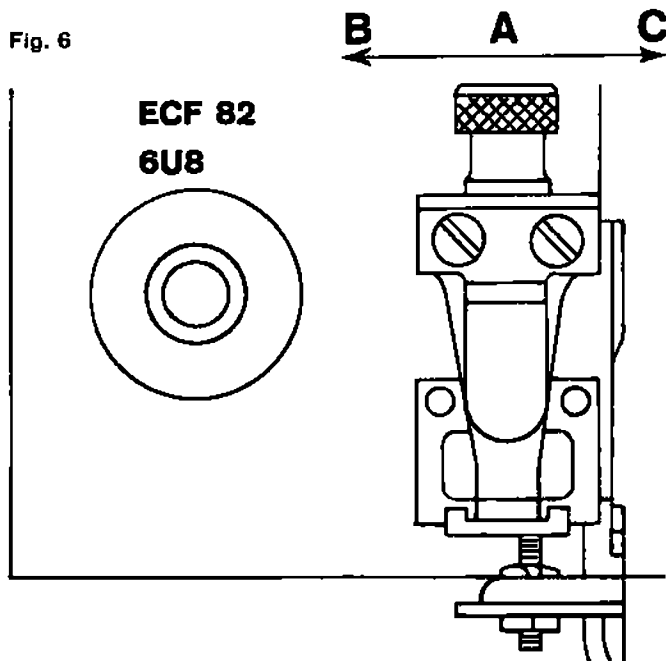
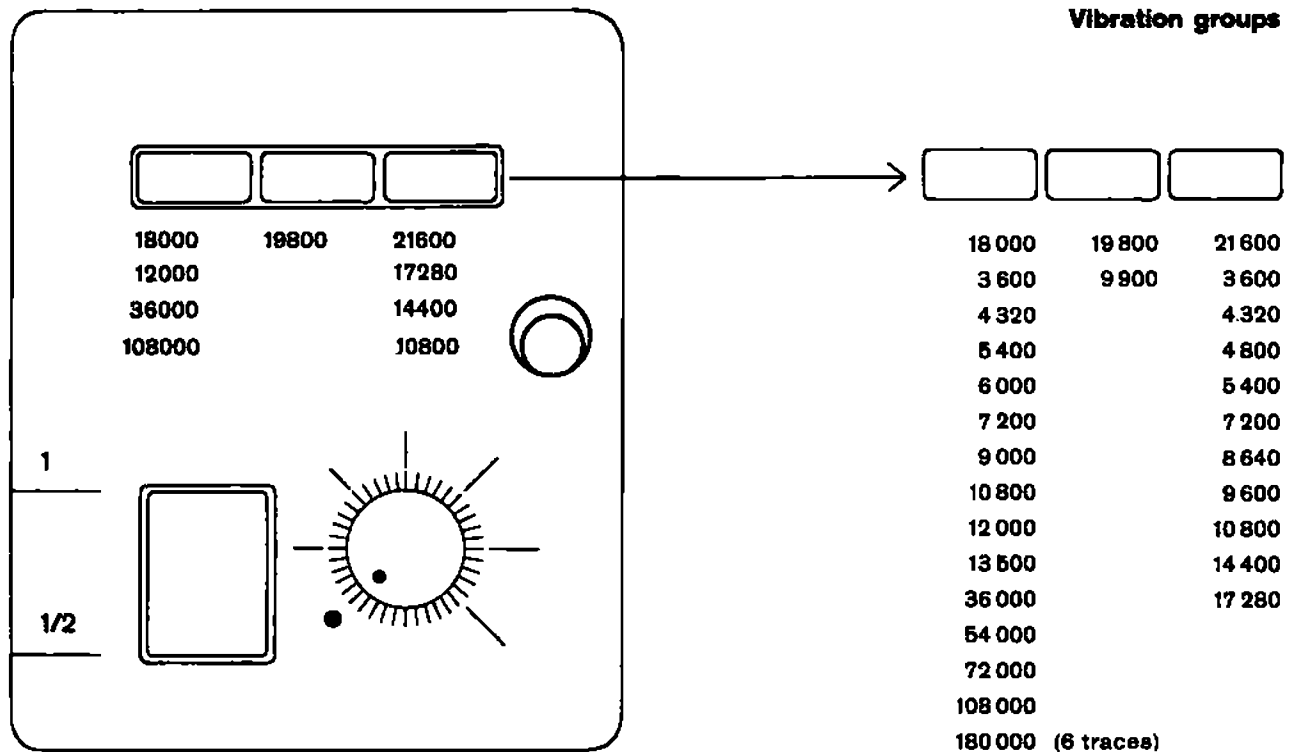


Fig. 7



Vibrograf® B100, like all Vibrograf machines, Gradoscop®, Electrotest, as well as the Secticon® battery operated clock, is a product of The Universal Escapement Ltd, La Chaux-de-Fonds, Switzerland, creators of the Incabloc® shock protective system.