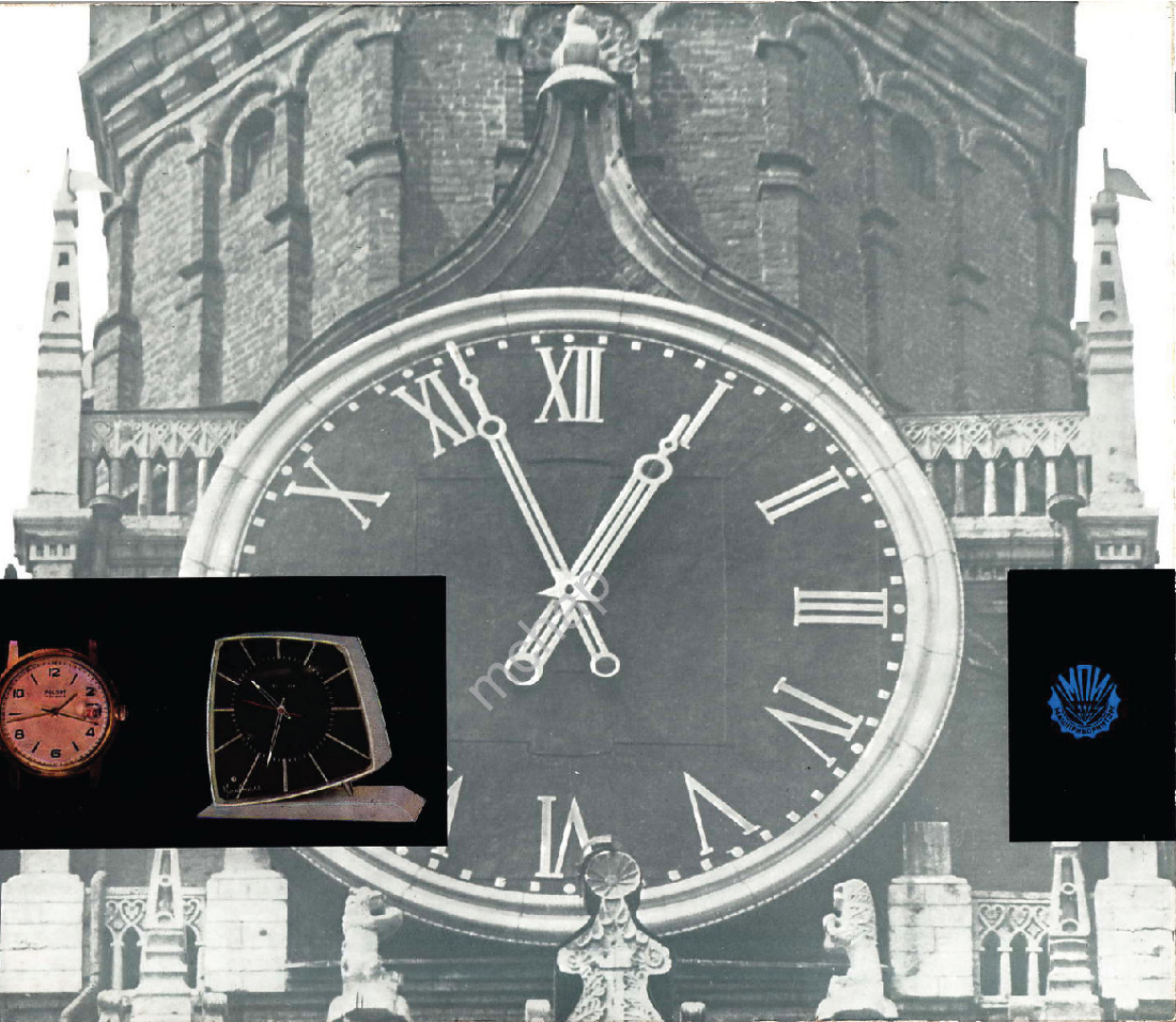


soviet  
horological  
industry  
and export  
of clocks  
and watches





**V/O MASHPRIBORINTORG EXPORTS SOVIET**



TIMEPIECES TO

67

COUNTRIES OF THE WORLD



# SOVIET HOROLOGICAL INDUSTRY



Automatic line installed at the 2nd Moscow Horological Factory for machining the plates of ladies' wrist watches of the "Slava" model. The line was also built at this factory.



Automatic line installed at the 1st Moscow Horological Factory for machining watch cases.

The earliest data about the production of watch and clock movements in Russia dates back to the 15th Century. Despite the nation's great demand for clocks and watches, pre-revolutionary Russia did not have a developed horological industry; she produced only the simplest types of wall clocks and had but a few small enterprises for assembling wrist and pocket watches from foreign parts.

The production of the first Soviet clocks, chiefly for technical use, was launched at the Moscow aircraft instrument-making plant in 1929. The assembling of alarm clocks was started at the same plant in 1926.

The foundations of the Soviet horological industry were laid in 1929—1930 with the building of the 1st and 2nd horological factories in Moscow and then in Penza. By 1940 these enterprises had produced 2,559,000 clocks and watches for the population.

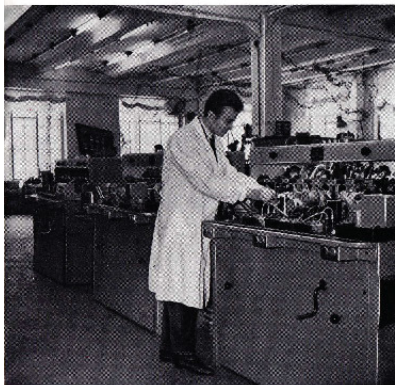
Cardinal structural and quantitative changes in the output of timepieces took place in the postwar period, during the rehabilitation and reconstruction of the Soviet national economy. In 1950 the country already turned out 7,566,000 clocks and watches. The main trademarks of timepieces for personal use were then the "Molnia" pocket watches, the "Zvezda" and "Pobeda" wrist watches. All their parts were of Soviet make. The output of timepieces had grown to 19,700,000 by 1955. This figure increased steadily in subsequent years, and the growth continues to this day. 27,100,000 timepieces were produced in 1963, for instance.

The Soviet horological factories are equipped with highly efficient automatic and semiautomatic lines, as well as modernized machine-tools for the production of parts. The conveyor line method of assembling timepieces was applied

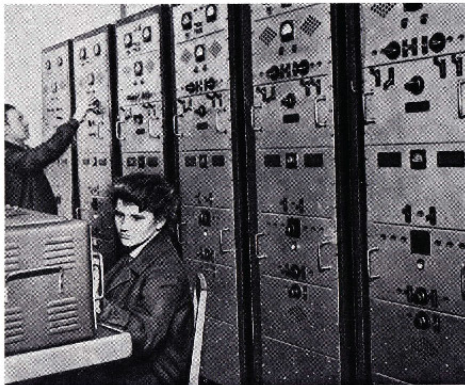
in the USSR earlier than in other countries. This required a high degree of interchangeability of all the parts of the movement. Many technological operations (over 1,000) have become cheaper with the use of conveyers. Experiments are now under way to automate the most labour-consuming, responsible and difficult part of watch-making — assembly of the movements.

The horological establishments solve many questions jointly with the Horological Research Institute, which studies the theory of timekeepers and works on their improvement, on the use of new effective materials, on the modernization of technology and organization of the production process.

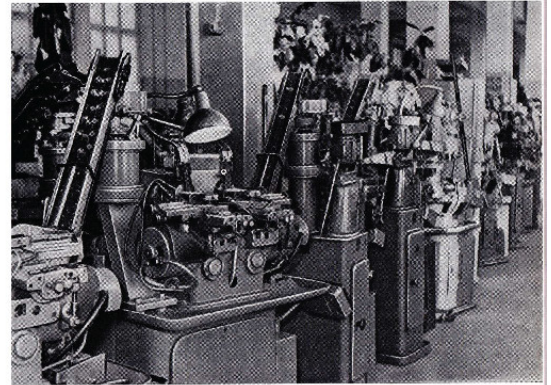
The Soviet horological industry is provided only with Soviet raw materials of different kinds, with metals and semifinished products, including artificial ruby jewels and winding springs, which are available for export.



Engineer Petr Tselov adjusting the automatic line installed at the 2nd Moscow Horological Factory to machine the barrels of midget alarm clocks



Electric measuring laboratory at the "Luch" Horological Production Society. Photo shows the control panel



Modern automatic machines for making movement parts, installed at a factory of the "Luch" Horological Production Society

Soviet timepieces have excellent technical characteristics, sufficiently long running period, stability to sharp temperature fluctuations, durability, and reliable shockproofing.

The cases of wrist watches are made of brass, white copper, and also of stainless steel and gold. Most of the cases are plated with gold or chromium. Widely used for the cases of wall and table clocks are various plastics, ceramics, artistic castings, and of large-size clocks — expensive species of wood. The extensive use of hard alloy and diamond tools, as well as the superb quality of the worked materials, contribute to a high degree of precision and to the use of equipment without frequent resetting.

The Soviet horological industry turns out various types of clocks and watches: wrist, pocket and stopwatches; table, wall, cabinet, fireplace, tower, street and special clocks (chess, signal, medical, timeboard, etc.); as well as

all the necessary types of timepieces for industry, science and technology — aviation, marine, automobile, laboratory, etc.

The Soviet horological factories produce a wide assortment of wrist watches, including antimagnetic ones in water- and dust- proof cases, with calendar, sound signal and automatic selfwinding mechanisms.

Designed and mass produced in the Soviet Union are extra flat men's watches "Poljot" ("Vympeľ"), which have a movement of 2.9 mm thick. These watches have won gold medals at the Leipzig Fair and at the Soviet Economic Achievements Display. Extra flat also are the "Raketa" watches which have a movement of only 2.7 mm. The Soviet Union is now launching the production of the tiniest ladies' watches "Chaika". They are smaller than the tiniest coin of most countries. Undergoing trials now are men's

electric wrist watches and watches with a tuning-fork governor. Besides table and wall clocks with mechanical and ordinary balances, very popular now are timepieces with an electric selfwinding mechanism.

All the clocks and watches are checked according to a special program at control-testing stations of horological factories. But checking is not the main guarantee of precision, it only shows that the movement runs accurately. The high standards of Soviet timepieces are guaranteed by progressive technology, efficient organization of production, talent of designers and engineers, the skill of factory workers. The complicated technological process of watch-making is impossible without highly skilled personnel. The technical and engineering cadres are trained at higher and secondary educational establishments, at special departments, while the workers are trained at technical schools and watch-making courses of horological factories.



**LARGEST  
HOROLOGICAL  
ENTERPRISES**

The internal market of the Soviet Union is fully satisfied by all types of Soviet-made timepieces and movements. Such giants as the 1st and 2nd Moscow factories, the Penza, Petrodvorets, Minsk and Uglich horological enterprises produce millions of timepieces a year of more than 30 models in 500 different modifications. A big part of the production of these enterprises is exported to other countries.

The Soviet horological factories are not only large-scale complex enterprises, but actually little townships. They have their own housing facilities, polyclinics, clubhouses, kindergartens and nurseries, canteens, libraries and sports grounds. Noteworthy among the horological factories are the particularly big enterprises, fitted out with the latest, highly efficient equipment.



Management building of the 1st Moscow Horological Factory



Assembly shop at the 1st Moscow Horological Factory



Soviet timepieces are assembled on such a modern conveyor line



Flat men's wrist watch "Poljat" with automatic self-winding mechanism, shockproof, 29 jewels

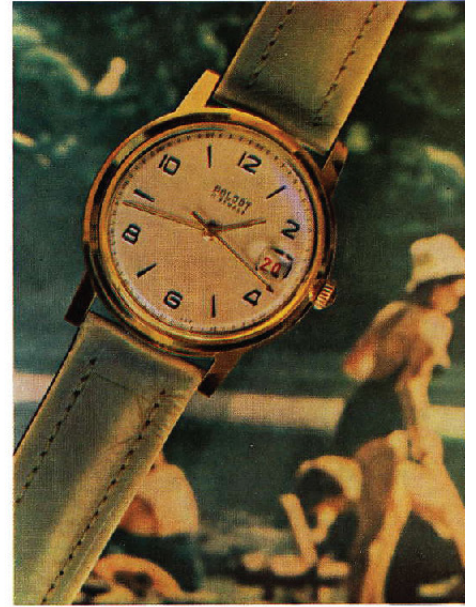
**1st Moscow Horological Factory Named After S. M. Kirov**



Wrist chronometer with seconds timer, produced by the 1st Moscow Horological Factory



Flat men's wrist watch "Poljot", shock-resistant, 23 jewels



Men's wrist watch "Poljot", model 2414/243360 with calendar, water- and dust-proof, shock-resistant



Over 2,000,000 high-class men's wrist watches were produced in 1963. They included "Poljot" watches with calendar, automatic self-winding mechanism, sound signal, one-hand seconds timer, and also extra flat 23-jewel watches with a 2.9 mm thick movement. Watches with a 2 mm thick movement will be produced shortly.

A total of more than 180 styles of wrist watches are now produced, as well as special clocks: marine, deck, etc.





Midget "Slava" alarm clock, model 55/1/0/5033, 11 rubles, modern fashion styling



Ladies' wrist watch "Slava", 17 jewels, in gold and chromium plated cases



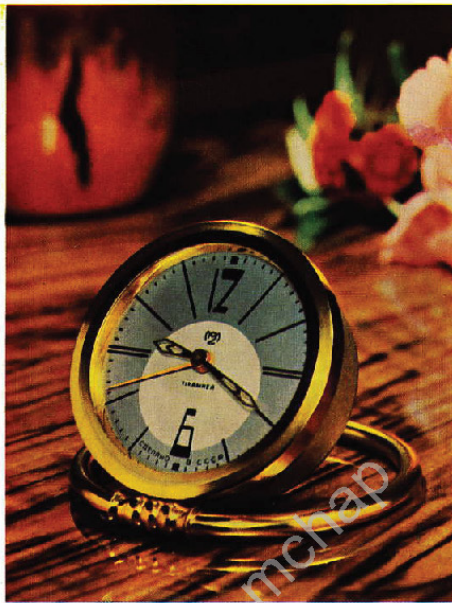
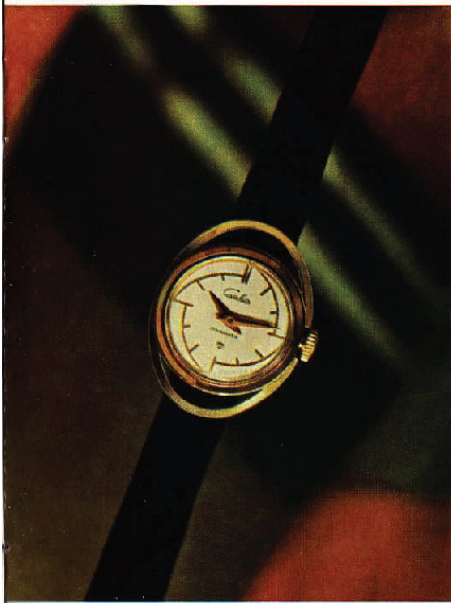
Management building of the 2nd Moscow Horological Factory

## 2nd Moscow Horological Factory



The factory produces more than 4,000,000 timepieces of different models a year. The ladies' wrist watches "Slava" and midget 11-jewel alarm clocks account for



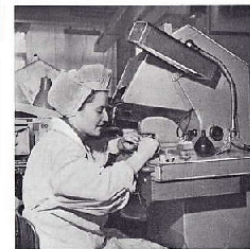


An assembly shop of the 2nd Moscow Horological Factory

Up-to-date projector helps the girl at the most responsible point of watch assembling



Controller Svetlana Lomazonova carefully checks the parts of timepieces. The point is to produce clocks and watches of top quality only!



Ladies' wrist watch "Slava", high-fashion styling



Midget "Slava" alarm clock, 11 rubles

most of the output. Work is now under way on men's electric wrist watches, including a model with tuning-fork governor.

Produced also are double-hand stopwatches and other technical timepieces, as well as machine-tools, automatic machines, and automatic lines for the horological industry.



Control-testing station of the 2nd Moscow Horological Factory where these superb alarm clocks are thoroughly checked





Building of the Penza Horological Factory



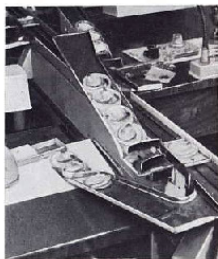
Checking of timepieces in one of the assembly shops of the Penza Horological Factory



Automatic drilling machine installed at the Penza Horological Factory



The reliable "Zaria" watches are assembled on such a conveyor line



Ladies' watch "Zaria", model 1529/1323032, with centre seconds hand, gold-filled case, shockproof, diameter 15 mm. This watch has won the Grand Prix of the Leipzig Fair



Ladies' wrist watch "Zaria", model 1509/213033. These timepieces are produced in different gold and chromium plated cases

## Penza Horological Factory



This is a big clock and watch factory with an annual output of about 4,000,000 timepieces a year. It turns out men's and ladies' "Zaria" wrist watches.

The men's "Zaria 3" wrist watches, 32 jewels, with self-winding mechanism, are particularly promising.



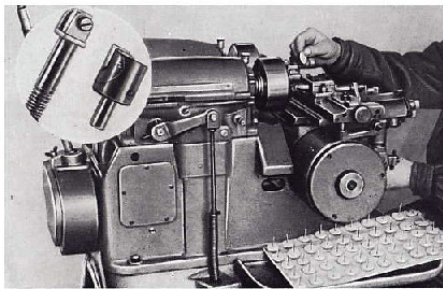
One of assembly shops of the Penza Horological Factory







Automatic shop of the Petrodvorets Horological Factory



Machine-tool in one of the shops of the Petrodvorets Horological Factory



Ultra flat men's wrist watch "Raketa", gold-filled case, with a movement of only 2.7 mm thick



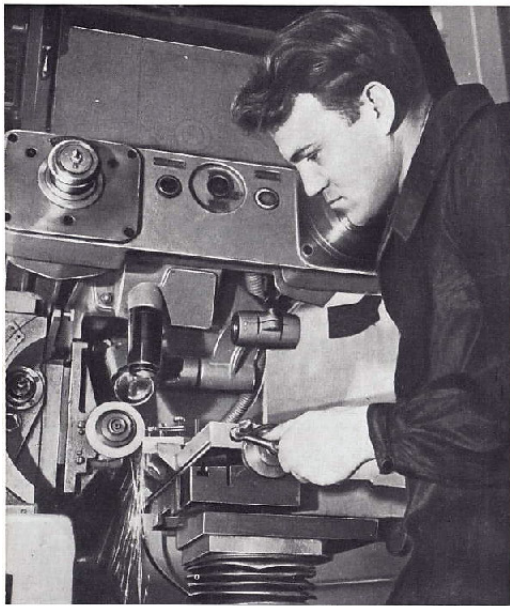
Man's wrist watch "Raketa" in dust and water proof case



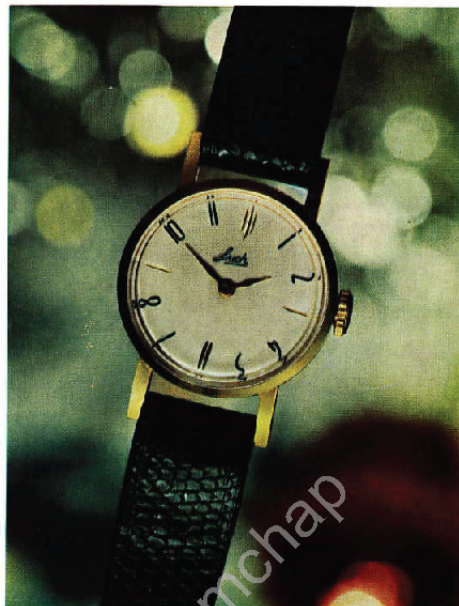
## Petrodvorets Horological Factory



This factory specializes in the production of ultra flat men's wrist watches "Raketa" ("Rekord") with a movement of 2.7 mm thick. Besides, work is now under way on men's electric wrist watches.



Optical grinding machine-tool installed in one of the shops of the "Luch" Society



Ladies' wrist watch "Luch" in gold-filled case. These watches are produced in different styling



Ladies' watch "Luch" in a coulomb-shaped case

Automatic shop of a factory of the "Luch" Horological Society

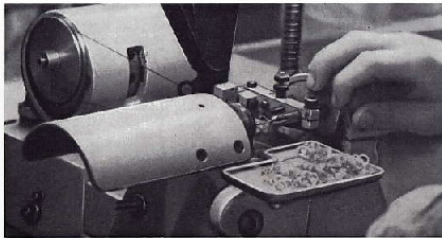


## "Luch" Horological Production Society

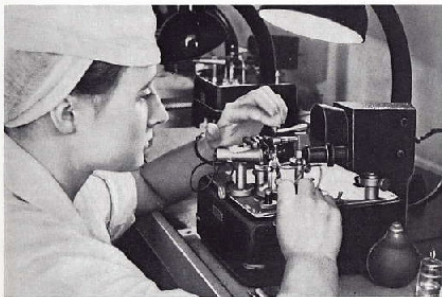


The Society's main specialization is ladies' wrist watches of the "Luch" 1800 model, which are available in 45 different stylings. It also turns out miniature wrist watches of the "Luch" 1300 modification with a diameter of 13 mm, as well as extra flat men's wrist watches "Luch" 2209 with a 2.9 mm movement.

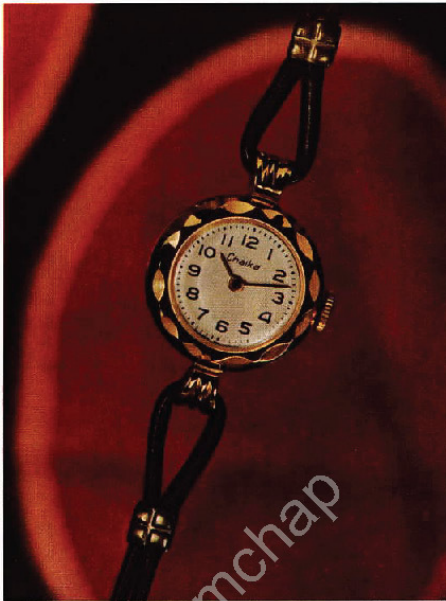




Instrument П32 for straightening balance and anchor wheel surfaces at the Uglich Horological Factory



Assembler Valentin Lebedev sets the balance by means of the П32 instrument of the Voinseburg watchmaking sector



Ladies' wrist watch "Chaika", model 1603/153000, gold-filled case, diameter 16 mm



Ladies' wrist watch "Chaika", model 1603/013000, gold-filled case. All the 1600 model watches are turned out in different styling



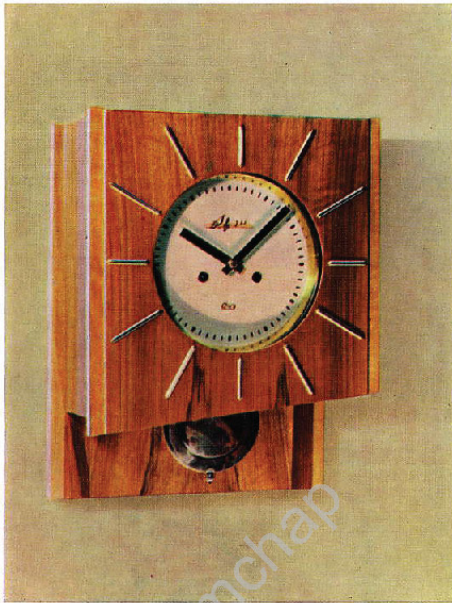
## Uglich Horological Factory



This factory produces small-size ladies' wrist watches of the "Chaika" model with 16 and 17 jewels. Its personnel has mastered the production of over 40 modifications of this model, including the Soviet Union's finest watch "Chaika", size 9×13.2 mm.



Chess clock "Janar" is indispensable at all chess tournaments



Wall clock "Janar", produced by the Crystal factory in original case



Rectangular clock "Janar" can be used as a wall or table timepiece at will

## Oryol Horological Factory



This is the biggest Soviet factory producing wall, cabinet and table clocks, as well as various types of alarm clocks. It turns out more than 3,000,000 timepieces a year.

The factory's production includes wall and cabinet clocks with a striking mechanism, table clocks with chimes, chess, medical and other timekeepers.



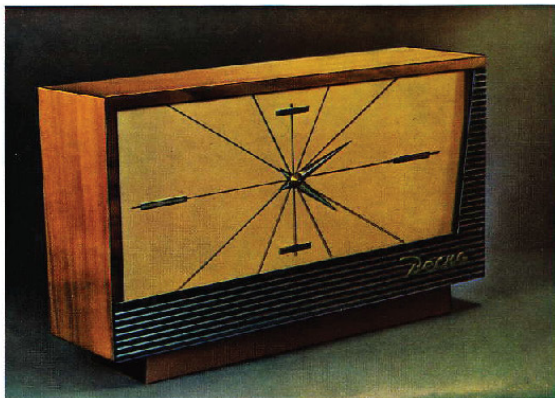
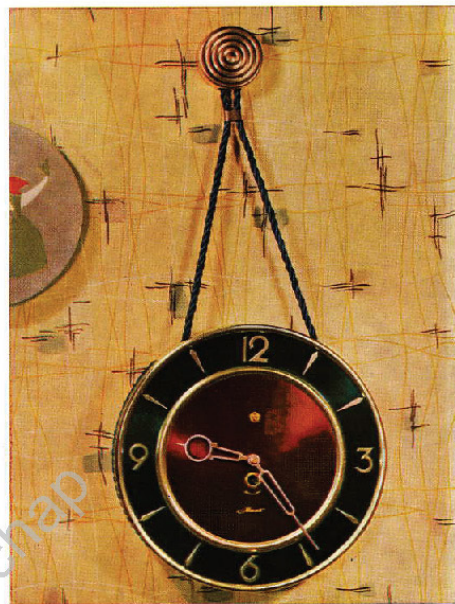


Table clock "Vesna" with case of expensive species of wood

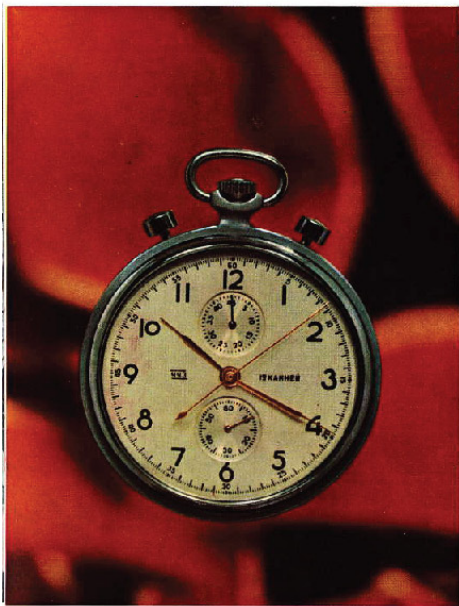


Wall clock "Majak" in polished metal case



The main production of the factory is wall and table clocks of the "Majak" model. Besides the simplest types of wall clocks, the factory produces technically complex balance clocks on ruby jewels with a 7-day winding spring.

## Serdobsk Horological Factory



Pocket chronometer

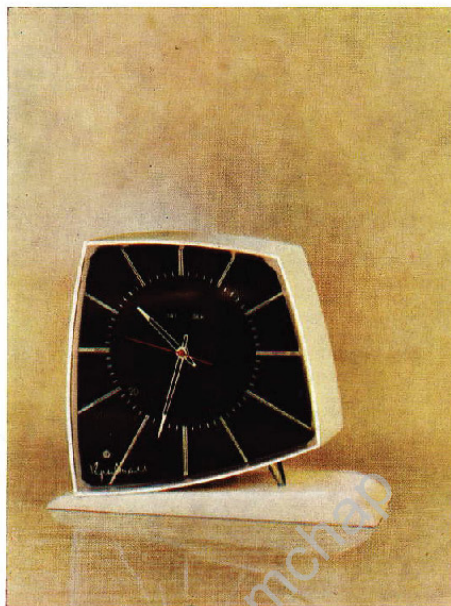


Table clock in attractive plastic case

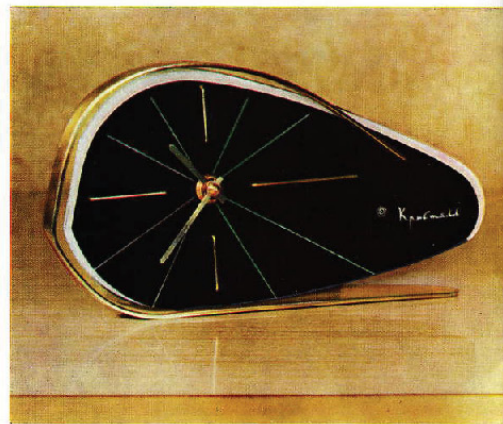
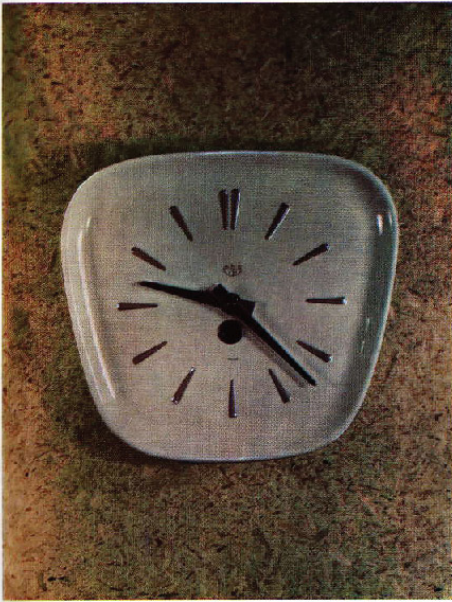


Table clock in modern-style case of metal and plastics

In addition to these huge factories, the Soviet Union also has 11 smaller enterprises, which produce the men's wrist watch "Wostok", pocket and

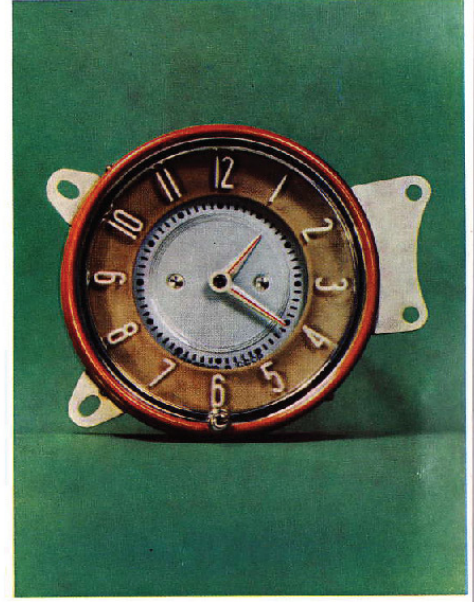




All housewives will appreciate elegant and cheap kitchen clocks



These table clocks with fountain pens are the last touch to any office



Our industry turns out different types of automobile and bus-clocks



table alarm clocks, stopwatches and special purpose clocks, namely for cars, marine and river fleet, for science and sports.



Several factories produce cheap 4-ruby jewel alarm clocks in elegant plastic and metal cases with a melodious chiming mechanism.

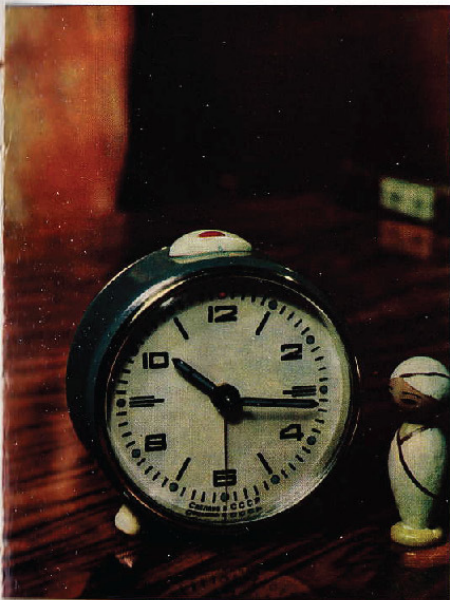


Flat men's wrist watches "Wostok" are produced in gold-filled, chromium-plated or stainless steel cases of different style.

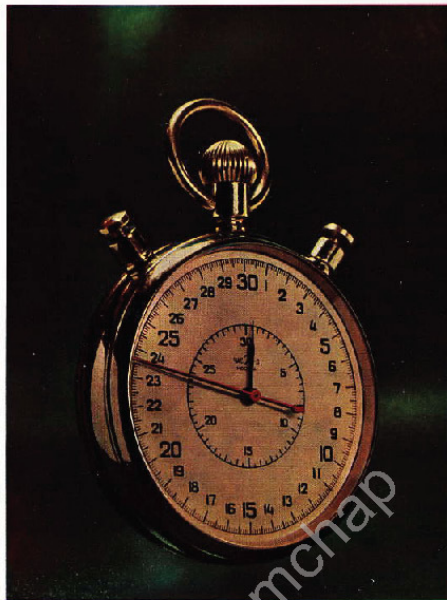


Men's wrist watch "Wostok" with calendar and shockproof device.





Unexpensive alarm clock in elegant case



Two-hand stopwatch 5106, indispensable in industry and sports, is available also in tropical modification

## EXPORT OF SOVIET CLOCKS AND WATCHES

Large-scale export of Soviet clocks and watches began in 1956 and has since been growing steadily. In 1956 the country sold 800,000 timepieces abroad and in 1953 this figure stood already at 6,000,000. This export is expected to expand further due to improving quality and growing assortment of Soviet clocks and watches.

Soviet timepieces are purchased by 67 countries of the world, including Great Britain, Belgium, Bulgaria, Hungary, GDR, Greece, Italy, Cuba, Lebanon, UAR, Poland, Rumania, Turkey, Czechoslovakia, Yugoslavia and other countries. More than 20,000,000 timepieces were sold abroad during the past five years, in addition to the over 100,000,000 sold in the home market.

The prices and quality of Soviet clocks and watches suit the foreign clients very well. This was confirmed by their trials in the sweltering heat of sand deserts, the rigorous climate of the Arctic and Antarctic, and in the unusual conditions of outer space, where they ticked on the wrists of Soviet cosmonauts, in Soviet space ships.

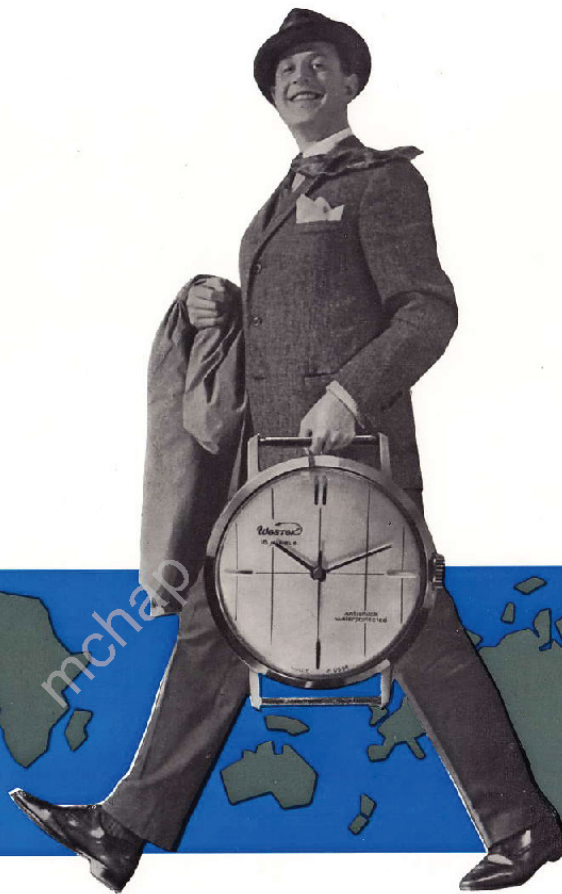
It is very convenient and profitable for the Soviet horological factories that all foreign trade transactions, connected with the export of clocks and watches, are handled by V/O "Mashpriborintorg", the sole exporter of Soviet clocks, watches and different instruments.

Address V/O "Mashpriborintorg" for detailed information on Soviet timepieces and purchase terms:



MASHPRIBORINTORG SSSR MOSKVA

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Moscow G-200  
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Telex: 188



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