

JUNGHANS MEGA MF

Multi Frequenz

W 615.93


JUNGHANS

GB Many thanks for choosing the Junghans Mega MF. Please read all of the following information regarding the operating principles of radio controlled watches in general and the instructions for operating your Junghans Mega MF to enable you to profit from all of the advanced functions of your watch. We hope that you will derive much enjoyment from this very special watch.

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Ⓞ 1. Radio technology

Cutting edge chronography.

5.000 years have now passed since the advent of chronography. Starting with sundials and water clocks, and advancing to the mechanical clocks from the 13th century and to quartz watches, chronography has now culminated in Junghans's radio controlled wristwatches.

Junghans's radio controlled wristwatches are always accurate and never require adjustment if there is good reception. These watches are absolutely accurate because they are linked to the most accurate clocks in the world by radio signals.

In Europe, this is the Cesium Radio controlled Clock of the German National Metrology Institute (Physikalisch-Technischen Bundesanstalt, PTB) in Braunschweig.

In North America, this is the Cesium Radio controlled Clock of the U.S. Department of Commerce, the National Institute of Standards and Technology (NIST) in Boulder, Colorado.

In Japan, this is the Cesium Radio controlled Clock of the Commercial Research Laboratory (CRL) of the Ministry of Post and Telecommunication.

These clocks are accurate to 1 second in 1 million years.



Your Junghans Mega MF radio controlled wristwatch is able to automatically receive the radio signals of the time signal transmitter stations

- DCF77 in Mainflingen (24km Southeast of Frankfurt a.M.) for **Europe**,
- WWVB in Fort Collins Colorado (USA) for **North America**
- JY40 on Mt. Ohtakadoya (near Tokyo in the Northeast of Japan) for **Japan**
- JY60 on Mt. Hagane (in the Southwest of Japan) for **Japan**, the **East coast of China**(Beijing, Shanghai), for **South Korea** and parts of **Taiwan**.

This means that the time displayed by your Junghans Mega MF will always be accurate to a billionth of a second when within range of one of these 4 transmitter stations and when reception is good. Junghans's radio controlled wristwatches automatically synchronise themselves every day between 02:00 and 03:00 o'clock analog time with the time signal transmitters DCF77, WWVB, JJY40 and JJY60. If your Junghans Mega MF is unable to receive a signal due to interference (e.g. thunder storms, electronic devices, light dimmer), it will automatically attempt to receive a signal the following day at the same time. The time can also be synchronised manually by calling a transmitter, e.g. from a place with better reception.

The most recent time-information received is saved in an internal time-memory. This original time will be applied by means of a high-precision 32 kHz quartz oscillator until the next time the time is synchronised. The radio controlled time synchronisation function of your Junghans Mega MF radio controlled watch not only ensures total time accuracy, but also automatically switches from wintertime to Daylight Saving Time (Europe and North America) and vice a verse (at night) when it receives a signal. The Junghans Mega MF time zone adjustment function enables you to set your watch to the relevant local time when travelling in countries with other time zones.

2. Operationability

Please make sure that your watch is supplied with sufficient power to ensure that it is always operable.

The watch regularly checks whether sufficient battery power is available. If the battery is low (empty battery, ambient temperature too low and affects battery performance), the seconds hand stops on the 12:00 hour's position, and the currently selected LC display flashes and alternately displays "L0". If the battery does not recover (e.g. higher ambient temperature), you should bring the watch to your specialist retailer or send it to Junghans's Service Centre within 7 days to have the battery replaced.

Battery type: CR 1620

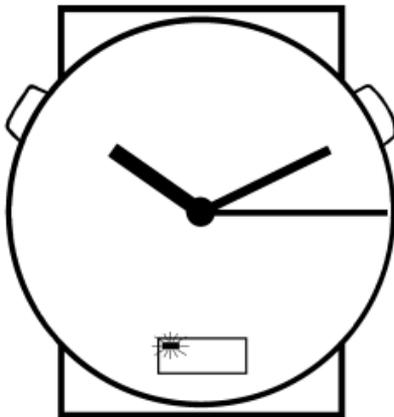
Average service life: approx. 2 years

Please ensure that the battery is disposed of professionally and in accordance with the legal regulations.

Please note that the manual time synchronisation function cannot be used when the battery is low, as this would require too much energy.

3. Automatic time synchronisation

The watch is synchronised every day fully automatically between 2:00 and 3:00 o'clock analog local time. When the time signal is being received, the seconds hand momentarily stops on the 15 seconds positions. The reception indicator on the LC display will furthermore flash during reception.

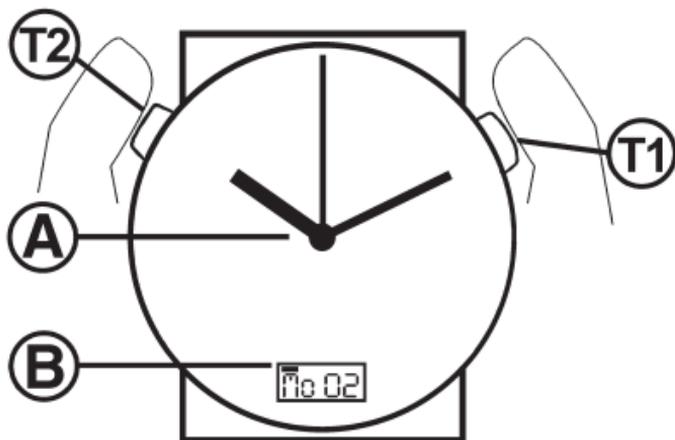


Once the watch has been successfully synchronised, the reception indicator symbol will be continuously displayed again. The date is also automatically adjusted by the time signal, and this function also takes the 29.02. into consideration in leap years.

If all attempts to receive a signal fail to clearly synchronise the watch, the reception indicator will be deactivated (see section 6.2, Description of the reception indicator mode). On days on which the watch has not been synchronised, it will operate with the accuracy of a quartz watch by using its internal time-memory. The watch will then be synchronised as soon as a signal is successfully received. Once synchronised, the reception indicator in the LC display will be re-activated.

Recommendation: The watch should not be worn and not be stored close to electronic devices, mobile phones or cordless telephones to ensure creating the best possible conditions for receiving the time signal at night.

4. Functions



Ⓐ	Analog display: Hours, minutes, seconds
Ⓑ	LC Display: Weekday date, transmitter indicator, 2nd time, language for weekday, power control indicator (If the battery power is low, the seconds hand stops on the 12 hours position, the currently selected LC display flashes and alternately displays "LB".)
Ⓙ	Weekday, date, 2nd time and transmitter call button Selecting the language for displaying the weekday
Ⓚ	Time zone adjustment (- 12 / + 12 hours) button, 2nd time, selecting the language for displaying the weekday.

5. Optional LCD display functions

LC-Display	 <p>The diagram illustrates the sequence of LCD display functions. It shows three rectangular boxes representing the display screens. The first box shows 'Mo 02' with 'Date' written below it. An arrow points from this box to the second box, which shows '12:32' with '2nd time' below it. A double-headed arrow connects the second box to the third box, which shows 'DE' with 'Language' below it. A line from the right side of the third box loops back to the left side of the first box, indicating a return to the date display.</p>
Ⓣ1 Pressing 1x	The display changes from showing the date to showing the 2nd time.
Ⓣ1 Pressing 2x	Displays the language setting
	The watch automatically switches back to displaying the 2nd time after having displayed the language setting for 9 seconds.
	If the battery is low, the LC display shows the seconds (display flashes and alternately displays [Lo]). The seconds hands stops at 12:00 hours. You can still change the setting to display the date or the 2nd time by pressing T1.

6. Description of the functions and how they are controlled

6.1 2. Time

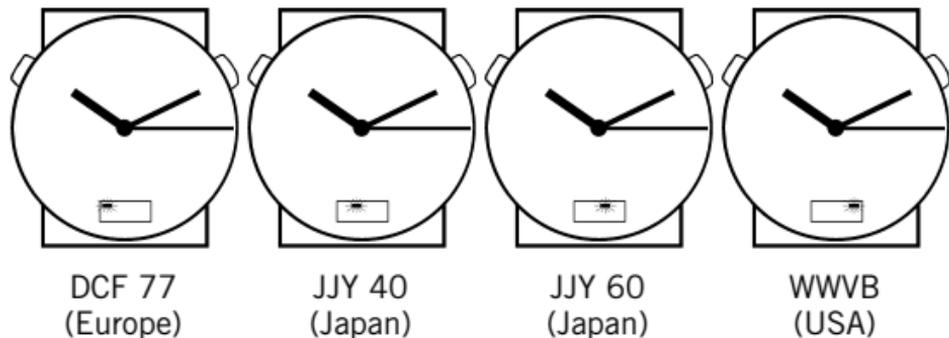
The 2nd time enables a second time to be displayed in addition to the analog time (e.g. when on holiday in another time zone and you would like to keep track of your local time at home).

Keep pressing T1 until the 2nd time is digitally displayed in the LC display. The 2nd time can be adjusted in stages of 30 minutes by pressing T2.

To do so, press T2 when the 2nd time is displayed in the LC display. This will make the 2nd time flash. Each time the button is pressed, the 2nd time is changed by 30 minutes. You can adjust the 2nd time in fast mode by pressing T2 continuously.

6.2 Reception indicator

The reception indicator signals whether the watch has been synchronised with the signals from the transmitter stations. The LC display is equipped with 4 symbols that can be used to display the 4 transmitting stations from which signals can be received.



If the reception indicator is being shown in the LC display, the watch was properly synchronised through the synchronisation process during the previous night. If no reception indicators are shown in the LC display, the automatic synchronisation process failed due to bad reception conditions. The reception indicator will be displayed again once a signal from one of the 4 transmitter stations has been successfully received.

6.3 Manual synchronisation (transmitter call)

Your Junghans Mega MF radio controlled watch can also be manually synchronised, i.e. you can call the transmitter station. To do so, press T1 for 4 seconds. The seconds hand will start to move and will then stop on the 12:00 hour position. The minutes and hours hand will continue to indicate the current time. The reception phase now starts, and the reception indicator for the transmitter that was used last for synchronisation will now flash in the display. Instead of the date, the seconds will be shown digitally [00]. Please keep the watch still when making a transmitter call or remove it from your wrist.

Your Junghans Mega MF radio controlled wristwatch will first attempt to receive a signal from the transmitter that was last used for synchronisation. If it is not possible to synchronise the watch with a signal from that transmitter, all other transmitter stations will be called to check whether their signals can be received. The digitally displayed seconds in the LC display will start to run as soon as the first signals are received.

Once the watch has received the signal, the hands automatically adjust to the local time of the transmitter, the seconds hand moves to the relevant second, the successfully received transmitter is indicated by the relevant reception indicator and the current date is displayed. In the event that you are in a different time zone from that of the transmitter from which the signal was received, you have to adjust the time to your current local time by using the time zone adjustment function after having successfully completed the transmitter call.

The following time zones are displayed when receiving signals from a transmitter station:

Transmitter	Time zone
DCF77 (Europe)	MEZ or MESZ
WWVB (North America)	Pacific Time
JJY40 (Japan)	Local Time Japan
JJY60 (Japan)	Local Time Japan

You can also finish the manual synchronisation as soon as the seconds hand is on the 12:00 hours position. To do so, press T1 once. The seconds hand will then return to the original time.

Please note that your watch cannot be manually synchronised if the battery voltage is low and the [L0] symbol is being displayed.

If a transmitter call was unsuccessful, the reception indicator does not change and the seconds hand will return to indicating the time that was shown before the transmitter call was made.

6.4 Time zone adjustment

The Junghans Mega MF radio controlled wristwatch receives the signals from the DCF77, the WWVB, the JY40 and the JY60. This means that your watch will reliably show summer or wintertime (Europe and North America) within the transmission zones. If you are travelling to a country in a different time zone, you can either set the watch to display the local time of that country as the 2nd time in the bottom part of the display (please refer to point 5.1 for information on how to adjust the time) and/or set the analog time display to display the relevant local time.

To do so, keep pressing T1 until the date is displayed in the LC display. Press T2 to digitally display the hour in the LC displayed (e.g. [T 12] for 12 o'clock) in addition to the date. Press T2 again to adjust the time zone and to set the watch hands to show the current time in the relevant time zone. You can also use the digital hour display as a support when adjusting the time. The hours can be adjusted in fast mode by continuously pressing T2. The time zones can be adjusted in one-hour stages by plus or minus 12 hours. The date will, if required, also be automatically adjusted when adjusting the time zone.

Please apply the same procedure to reset the 1st time, i.e. the analog time display, to the original time.

6.5 Selecting a language (Weekday indicator)

The language setting of the weekday indicator of Junghans's Mega MF radio controlled wristwatch has been set to German at the factory.

Press T1 until [DE] for German is shown in the LC display to select a different language for the weekday indicator. Press T2 once to change the date indicator to English, after which the LC display will display [EN] for English.

7. Restart/start

The watch is automatically restarted each time the battery is changed. Once the battery has been inserted, the hands move to the 12:00 hours position and the watch starts to receive the time signal. While doing so, the reception indicator of the transmitter that is currently being called flashes. The seconds in the LC display start running as soon as the signals are received. The watch automatically adjusts itself to the correct transmitter time after a few minutes if the signals were received successfully.

- If signals from DCF77 have been successfully received, German Local Time will be displayed. The reception indicator for DCF77 in the LC display will be activated and the date will be shown with the weekday in German.
- If signals from WWVB have been successfully received, the Current Pacific Time will be displayed. The reception indicator for WWVB in the LC display will be activated and the date will be shown with the weekday in German.

- If signals from JJY40 or JJY60 have been successfully received, the Current Local Time in Japan will be displayed. The reception indicator for JJY40 or JJY60 in the LC display will be activated and the date will be shown with the weekday in German.

The transmitter call will be aborted to save energy if the watch is unable to receive a signal for more than 30 minutes. The hands will stay at 12:00 hours and the LC display will show two flashing lines [--].

Although the watch will not have been synchronised, it can be manually adjusted to show the current local time (so-called manual start). The watch will then operate like a normal quartz watch.

7.1 Manual start

The watch can be manually started after an unsuccessful restart (no signal received from transmitter for at least 30 minutes) or while it is being restarted.

To do so, press T2 after the hands moved to the 12:00 hours position during restart. The watch is now in manual start mode. The receiver for the transmitter is now turned off and the seconds hand starts to move. The LC display shows two lines [--].

The time can be changed in stages of one minute. The time will advance by one minute each time T2 is pressed. The minutes will also be displayed digitally in the LC display for support.

Press T2 continuously to activate fast mode and start the hands moving. This function can then be used to adjust the required time.

If no buttons are pressed for 9 seconds, the display will return to its original state and 2 flashing lines [--] will be shown in the LC display.

Once the time has been adjusted by using the manual start function, it is not possible to display a date. This will only be possible again once the watch has been successfully synchronised with a time signal transmitter.

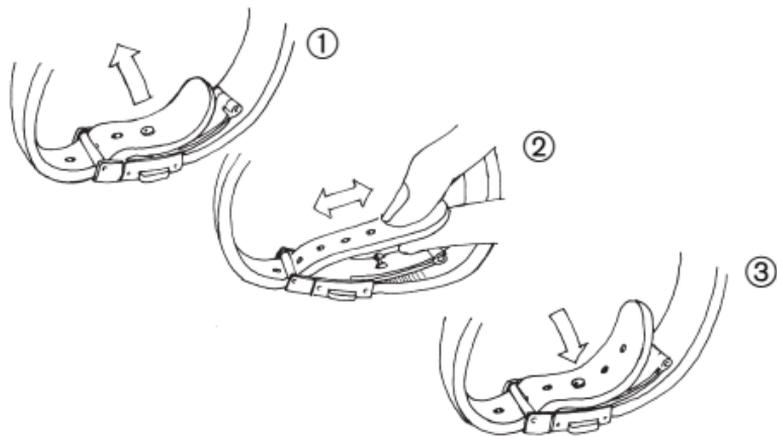
The 2nd time in the LC display can be called up by pressing T1. Please proceed as described in section 6.1 to change the 2nd time.

Your Junghans Mega MF radio controlled wristwatch will try to receive a time signal every 6 hours while in manual start mode. As soon as the watch has been successfully synchronised, the displayed time will be updated and the current date will be displayed.

8. Adjusting the strap

Depending on the model, your Junghans Mega MF will either be equipped with a leather strap and a deployant clasp or with a metal strap and a deployant clasp.

You can adjust the leather strap to fit your wrist as follows:



Stainless steel strap should only be adjusted by specialist watch retailers, and watches with stainless steel straps can also be sent to Junghans's Service Centre for adjustment.

9. Water resistance

Designation		User Information				
Back of the casing	Watch face	 Washing, rain, splashes	 Showering	 Bathing	 Swimming	 Diving without equipment
*	*	no	no	no	no	no
water resistant 3 bar	*	yes	no	no	no	no
water resistant 5 bar	*	yes	no	yes	no	no
water resistant 10 bar	*	yes	yes	yes	yes	no

* no designation

The designation "water resistant" only applies to brand new watches.

External influences, however, can affect water resistance.
Please have your watch checked regularly.

10. General information

- Only let specialist retailers perform maintenance work such as glass, seal or strap repairs.
- Please have the seals and the glass checked regularly (approx. every 2) years by a specialist.
- In the event that condensate penetrates into the watch, please have it checked immediately by our customer service department. Water inside a watch can cause serious damage.
- Your watch is equipped with a quality strap that has been subjected to rigorous tests in our house. If you chose to change your strap, please use a strap of equal quality, or, preferably, an original Junghans strap.
- Clean the watch and strap with a dry or slightly damp, soft cloth. Caution: Do not use any chemical cleaning agents (e.g. petrol or paint thinners), as these can damage the surface.

11. Technical information

Synchronisation time when there is perfect reception	approx. 3 minutes
Time zone adjustment range	+ 12 hours, - 12 hours
Changing from CET to CEST and vice a verse	automatic
Synchronisation with the time signal transmitters	2:00 and 3:00 hours analog time
Operating temperature	0° to + 50° C
Technical changes reserved.	

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