



Junghans Mega

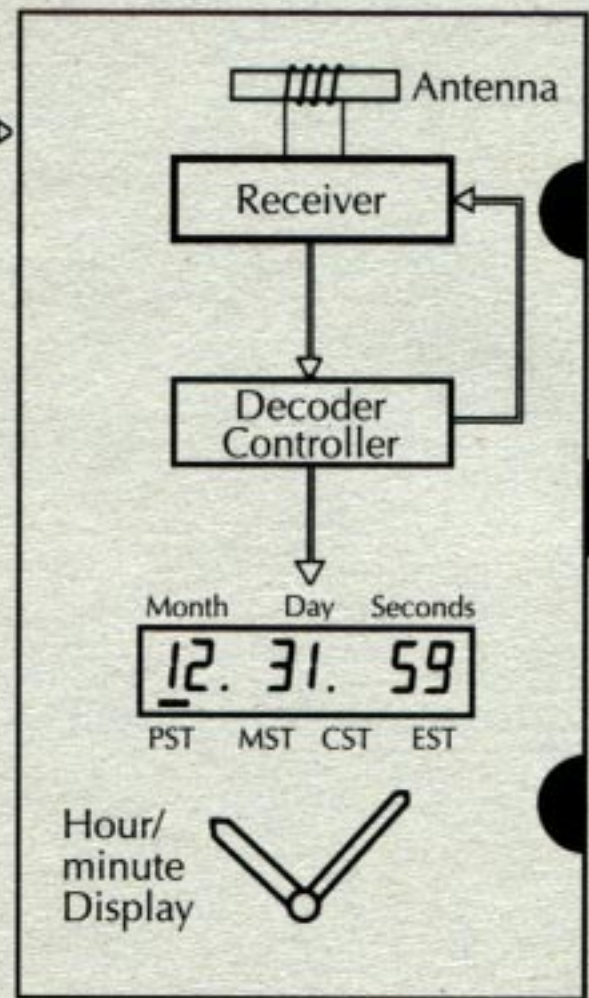
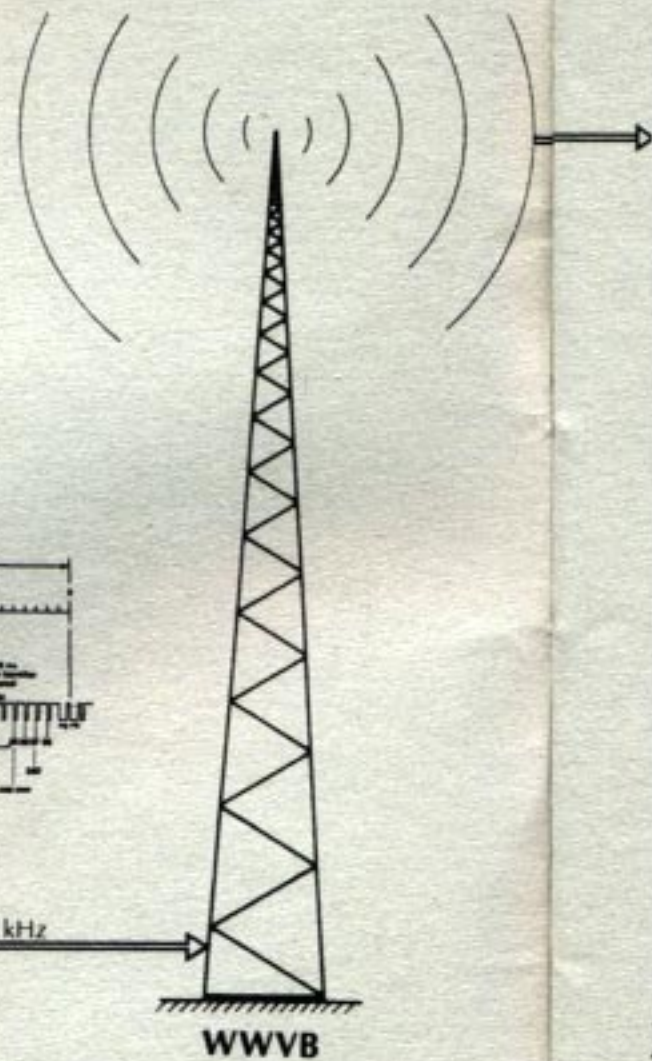
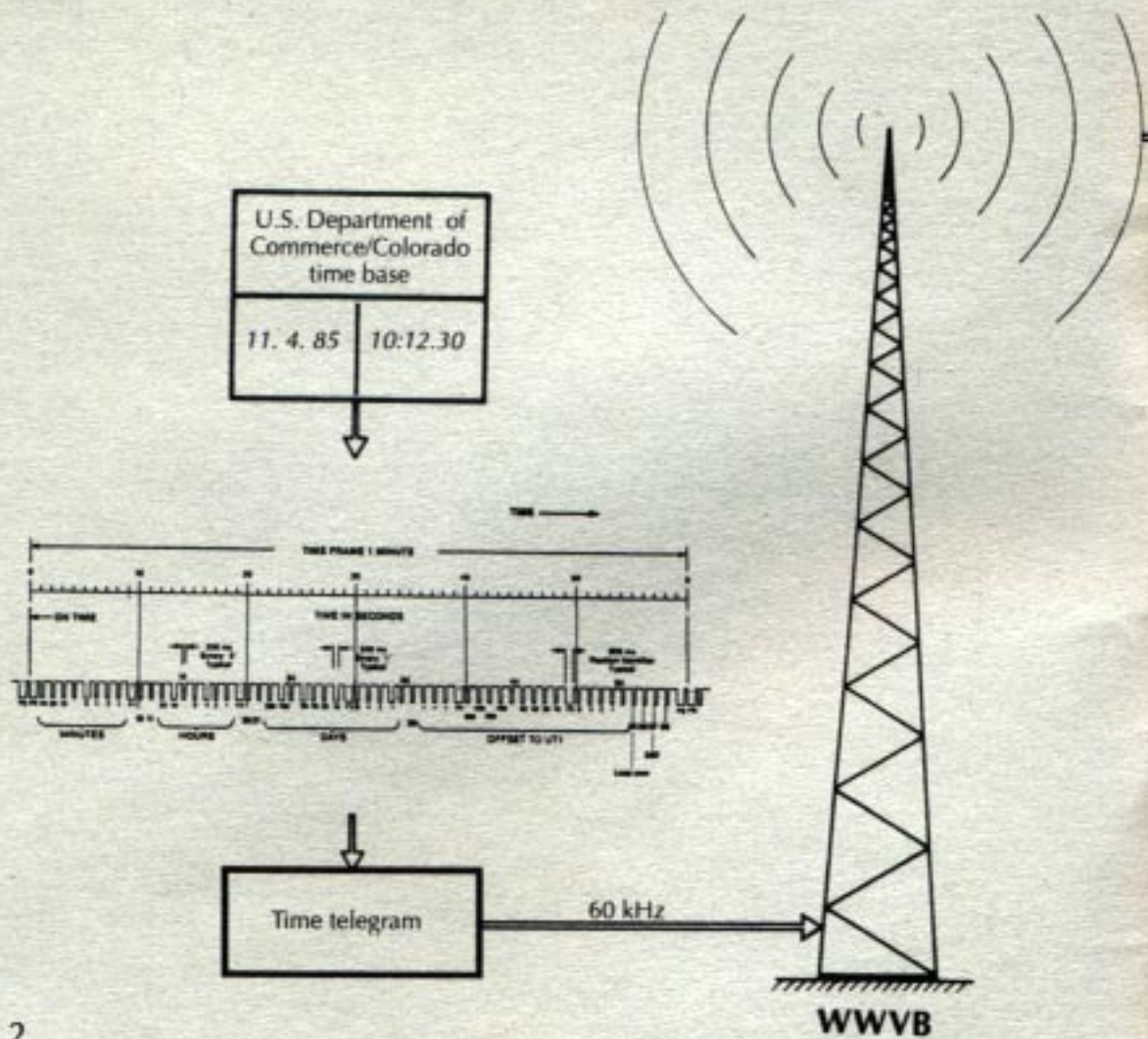
Radio-controlled watch

Instruction manual

42712-0340/0497

JUNGHANS UHREN GmbH
D-78701 Schramberg · P. O. Box 100 · Germany

How the Junghans Mega functions

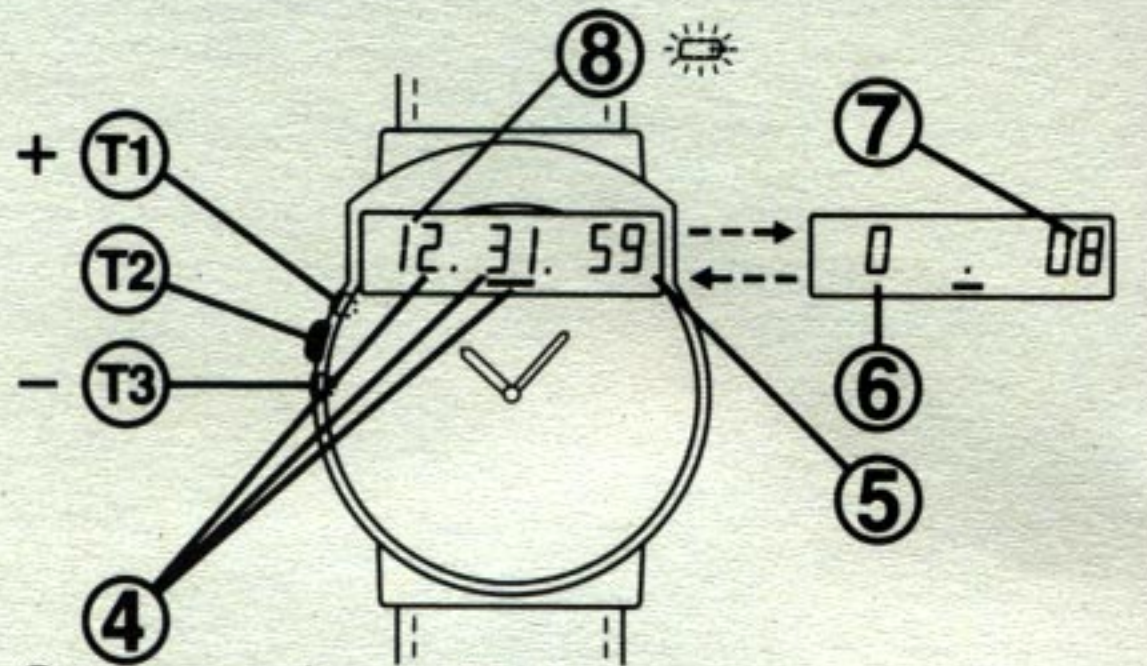


Time zone button T1

Transmitter call button T2

Time zone button T3

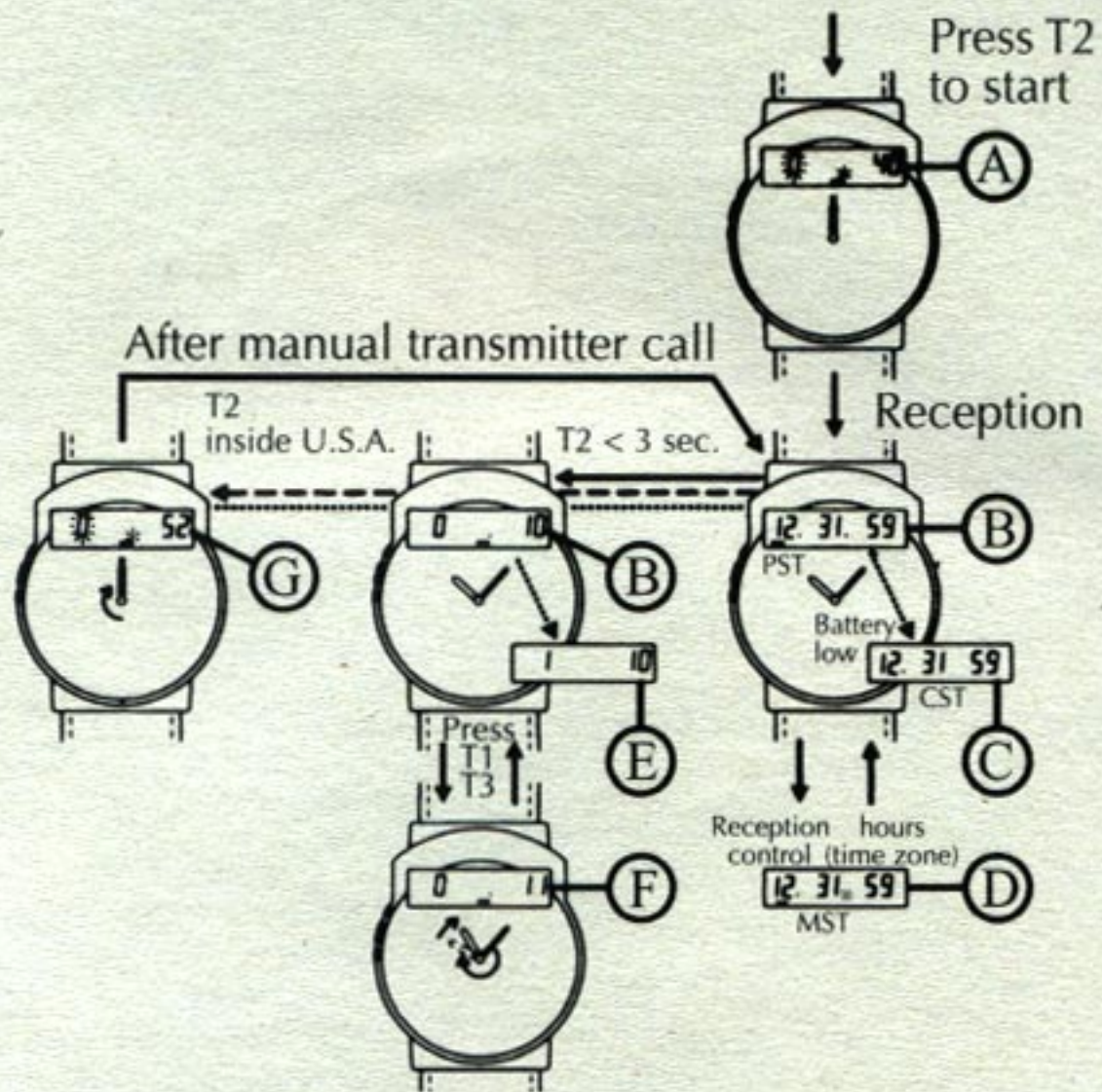
Junghans Mega Radio-controlled watch



- ① Time zone button (+) T1
- ② Transmitter call button T2
- ③ Time zone button (-) T3
- ④ "Perpetual calendar" display: month, date, time zone
- ⑤ Seconds display
- ⑥ Reception indicator
- ⑦ Time zone display (hours)
- ⑧ Battery change indicator
(Change batteries within 4 weeks)

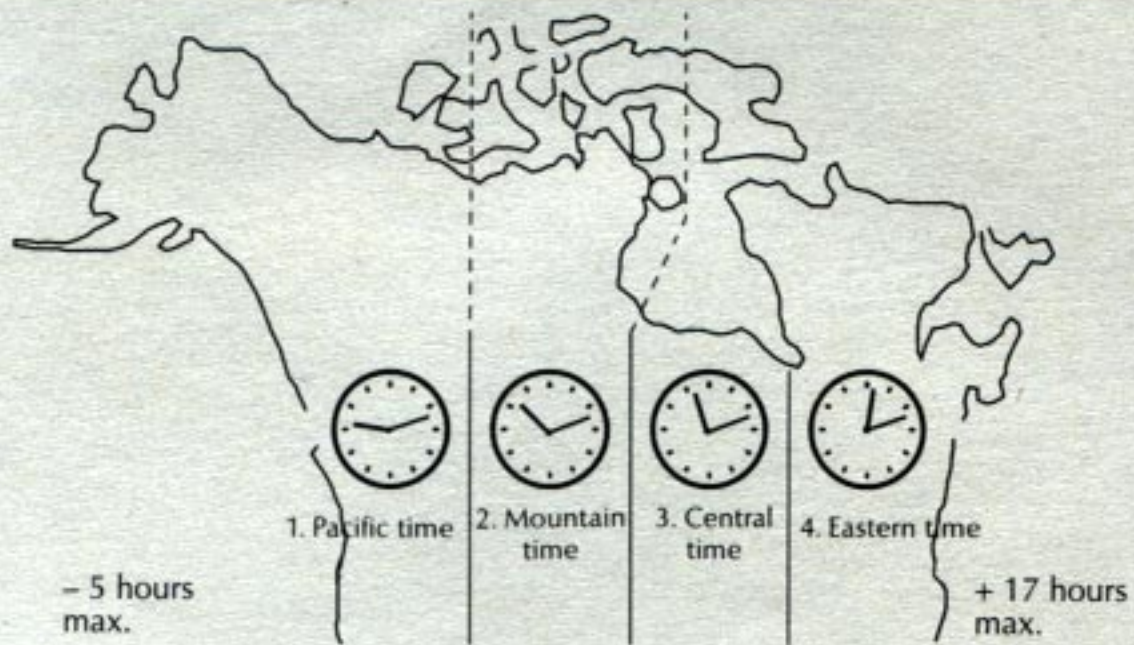
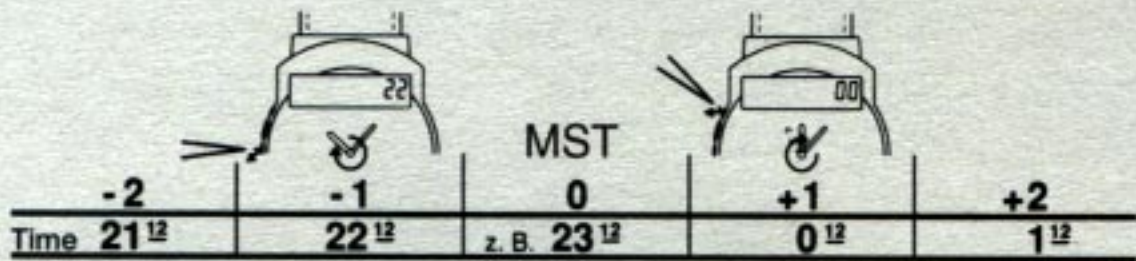
Functional sequence of the Junghans Mega

- Ⓐ During transmitter call: reception indicator flashes and seconds continue
- Ⓑ Display after automatic synchronization has occurred
- Ⓒ Display when automatic synchronization does not occur
- Ⓓ Automatic synchronization in time zones within the USA
- Ⓔ Display when automatic synchronization does not occur, e. g. for 1 day
- Ⓕ Time zone displayed in hours. Within the USA, the time zone is also displayed
- Ⓖ Indication of manual transmitter call



Setting the time zones on your Junghans Mega

- Adjustment, one hour at a time
- Automatic date adjustment
- Time synchronization only possible within the transmitter range (within the USA)



How your Junghans Mega radio-controlled watch functions

The most accurate clock in America is the atomic clock located at:

U. S. Department of Commerce
National Institute of Standards and Technology
Boulder, Colorado.

Your Junghans Mega radio-controlled watch receives "time telegrams" on long wave (60 kHz) from the WWVB time signal transmitter located in Fort Collins, Colorado. Until recently, the transmitter was used predominantly by telephone companies, radio and television stations, navigators of planes and ships, and for scientific purposes. But now, this precise time signal can be received privately and free of charge with the radio-controlled Junghans Mega.

Junghans Mega receives the WWVB transmitter via its built-in antenna system anywhere that long-wave reception is possible with a portable radio. In many cases, depending on local conditions, the radio-controlled Junghans Mega can be operated at a con-

siderably greater distance from the transmitter than is possible with a radio.

The computer in your watch processes the received time telegrams automatically and controls the hands accordingly. Once it has been set correctly by the radio signals, Junghans Mega continues running on its own highly accurate, internal 32 kHz time base, and compares the indicated time with the time information from the WWVB transmitter.

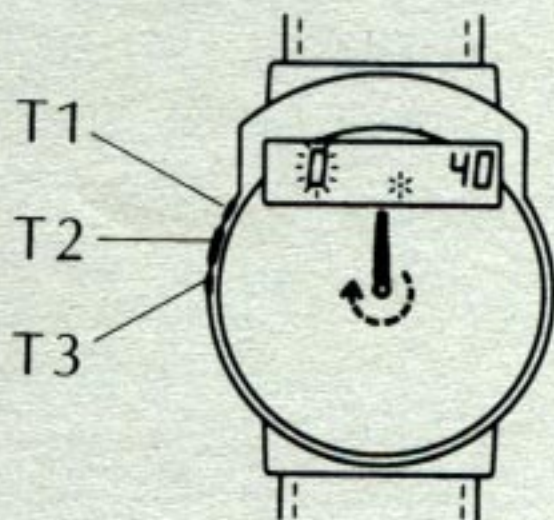
Automatic time synchronization of your Junghans Mega occurs daily between 11:00 PM and 5:11 AM because reception conditions are best at night.

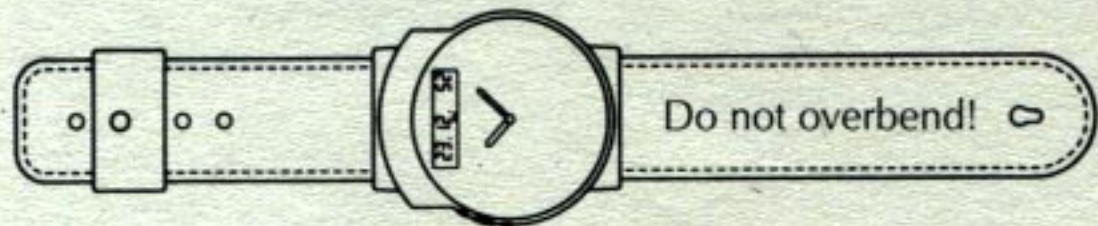
An additional major advantage of the radio-controlled Junghans Mega is the fully automatic changeover from standard time to daylight saving time and back again. When moving to a different time zone, the time zone button of the Junghans Mega enables you to set your watch to local time. Within the USA, the time zone is indicated on the digital LCD. In areas without daylight saving time the clock must be adjusted by using the time zone button.

Starting your Junghans Mega is straightforward:

To activate your Junghans Mega, press the transmitter call button T2.

- The hands move to the zero position and the watch starts to run, initially using its own time base.
- The reception indicator flashes at intervals of one second. This flashing indicates that your Junghans Mega is set to receive the radio signals.
- After 3 minutes with undisturbed reception, the hands of your Junghans Mega move to the precise time. The hands indicate the hours and minutes, the digital LCD shows the seconds and date. The time zone displayed after a start-up is always "PST".
- If radio reception is not successful, please read the following chapter (Reception phase).





The reception phase

To enable your Junghans Mega to receive the time telegrams quickly and without interruption, it should be kept as still as possible during the reception phase.

At night you should lay your Junghans Mega down to ensure ideal reception conditions. In this position the antenna can receive the time telegrams most reliably. For this reason daily automatic time synchronization takes place between 11:00 PM and 5:11 AM.

The number displayed in the reception indicator increases by 1 (up to a maximum of 9) with each unsuccessful automatic reception attempt. The number 3 in the reception indicator means that your Junghans Mega has had no contact with the WWVB transmitter for the last 3 days.

Possible interference sources preventing reception of the WWVB transmitter:

As in the case of all radio receivers, the Junghans Mega may also be subject to certain reception restrictions or interference.

Due to the special transmission and reception characteristics of long wave signals, local restrictions are only to be expected outside the range of the ground wave. Considerable interference may be caused by strong building "noise", such as that caused by metallic components. The main interference sources in the home include unsuppressed household appliances, TV sets and air conditioning.

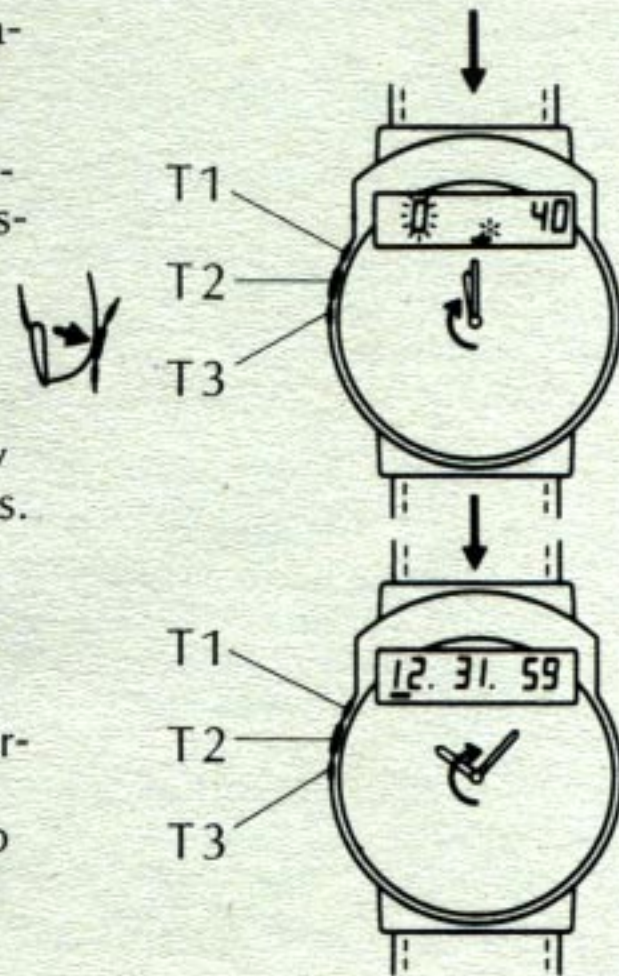
Manual time synchronization using the transmitter call button/reception indicator.

With your Junghans Mega you can also establish a link with the WWVB transmitter manually by pressing transmitter call button T2 for longer than 3 seconds (but less than 10 seconds). If you press T2 for less than 3 seconds, the digital LCD will change from date displayed to reception indicator.

- Button T2:
< 3 sec = display changeover
- Button T2:
> 3 sec and < 10 sec = transmitter call

- Your watch now checks its internally stored time by receiving in the new time telegram.
- The reception indicator flashes to indicate that the watch's receiver has been switched on.
- During the transmitter call, the hour and minute hands remain in the zero position and the digital LCD shows the seconds, beginning with "00".

- When time synchronization is completed, your Junghans Mega again shows the absolute correct time. The date is visible on the digital LCD.
- If reception of the first time telegram is disturbed, your Junghans Mega will automatically make 5 further attempts. If time comparison is still not possible, or if you interrupt the transmitter call prematurely by pressing T2, the internally stored time from the last successful radio contact will be displayed again.



Special tips

Resetting outside the range of the WWVB transmitter

Of course, your Junghans Mega can also be operated without radio control by the transmitter, just like a normal quartz watch. Assume, for example, that you are in Europe and need to restart your Junghans Mega because the battery had to be changed. In this case, you must begin with a "reset", as described below.

- When you carry out a "reset" all the time information stored in your Junghans Mega is deleted and the watch begins to receive new time telegrams. However, since the time telegrams from the WWVB transmitter cannot be received in Europe, you must now set your Junghans Mega manually.

To trigger a reset, simultaneously press the transmitter call button and time zone "-" button T3 for longer than 3 seconds. This causes the display to be deleted and when you release the buttons, the watch begins a reset.

You can then change to the "emergency start" function (e. g. outside the reception range) by pressing the time zone "+" button T1. The digital LCD shows the running seconds and the hands start from the 12:00 position. Press the time zone "+" button T1 again to set your watch to the correct time (the hand moves one minute each time you press the button). If you keep the button pressed, the hands start moving automatically after 0.8 seconds at a rate of twenty steps per second.

In this mode your watch attempts automatic synchronization once every hour. However, reception of the radio signal is not possible until you return to the USA, since in Europe you are outside the transmitter range.

Care and cleaning of your Junghans Mega

- Caution: Do not overbend the longwave antenna inside the strap.
- The battery and the seal for the case back must only be changed by an authorized JUNGHANS dealer.
- Your watch is shockproof under normal conditions of use. Do not drop it or wear it when playing sports.
- Due to its leather wriststrap and the antenna, your radio-controlled wristwatch is not suitable for swimming or diving. If you notice condensation in your watch, you must have it serviced immediately, water penetration may damage the electronic components inside.

Your radio-controlled watch and the wriststrap can be cleaned with a soft cloth, either dry or moistened with mild soap suds. Never use chemical cleaning agents (e. g. petrol or paint thinners) as they may damage the surface.

Technical data

Integrated radio receiver for receiving the WWVB time signal	60.0 kHz
Quartz time base	32 kHz
Type of battery	Cr 2016 (3 V/70 mAh)
Typical battery life	> 2.5 years
Operating voltage range	3.4 V to 2.55 V
Setting time with interferencefree reception	\geq 3 minutes
Changeover (standard/daylight saving time)	automatic
Time comparison with the transmitter	11:00 PM
If not reception at 11:00 PM then	every full hour until 5:00 AM
Operating temperature	-5° to +50° C
Full rotation of the hands	36 seconds
Control of the hands	by photobarrier
No licence fee.	
We reserve the right to make technical alterations.	

Warranty

Model No.:
Purchaser:
Dealer:
Signature:
Date:

Limited warranty

This clock was manufactured by Junghans using the latest technology. The functional capability of this clock has been tested several times and it is subject to the stringent standards of our Quality Control Department.

Scope of warranty

This warranty covers all defects in workmanship or material.

Duration of warranty

This warranty lasts for one year after the date of purchase. Notify Junghans promptly in writing in the event of any defect covered by this warranty. In addition, when having repairs done under warranty you must provide the guarantee certificate shown above as completed by the dealer who sold the watch, or you must provide other evidence of the date of purchase.

What this warranty does not cover

This warranty does not cover any malfunctioning in the watch due to the watch's failure to properly receive radio signals because of interference, whatever the source of that interference may be. In addition, this warranty does not cover any defects resulting from improper use of the watch or faulty batteries.

What Junghans will do to correct warranty problems

Junghans will repair defects covered by the warranty free of charge. To obtain such warranty service, return the watch, postage paid. If the defect cannot be repaired, then Junghans will either replace the watch with the same or a similar model or refund to you the purchase price of your watch.

UNDER NO CIRCUMSTANCES WILL JUNGHANS BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES IN CONNECTION WITH OR AS A RESULT OF THE OPERATION OR ANY MALFUNCTIONING OF THIS WATCH

Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above limitation of exclusion may not apply to you.

Other rights under state law

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

www.champsclock.com