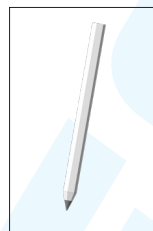


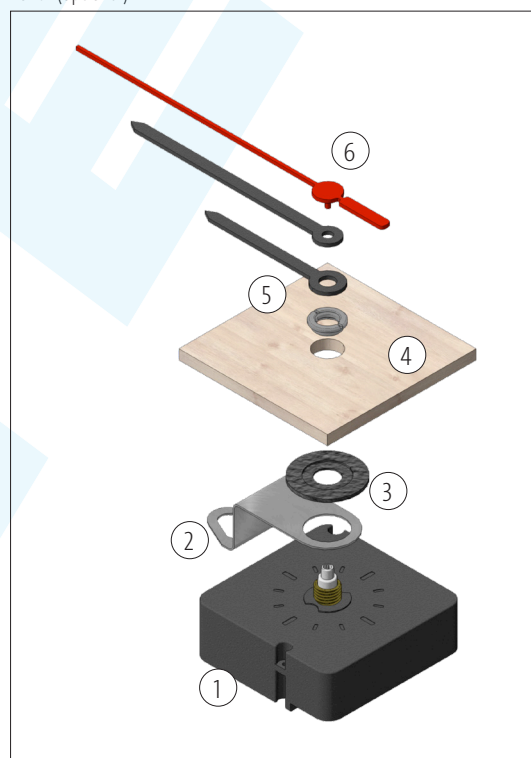
RC quartz movement (radio controlled clock)



Tools Needed:



Pencil (optional)



Please Note:

After completion, the OPITEC factory packs are not toys that are generally commercially available, but teaching and learning materials to support educational work. This kit may only be built and operated by children and young people under the guidance and supervision of knowledgeable adults. Not suitable for children under 36 months. Danger of suffocation!

parts list	quantity	Dimensions (mm)	Description	Part No.
RC quartz movement	1	55x55x30		1
Hanging bracket	1	56x20x19		2
Rubber disc	1	Ø24x1		3
Central nut	1	Ø12x3		4
Transport lock (pin-shaped)	1			

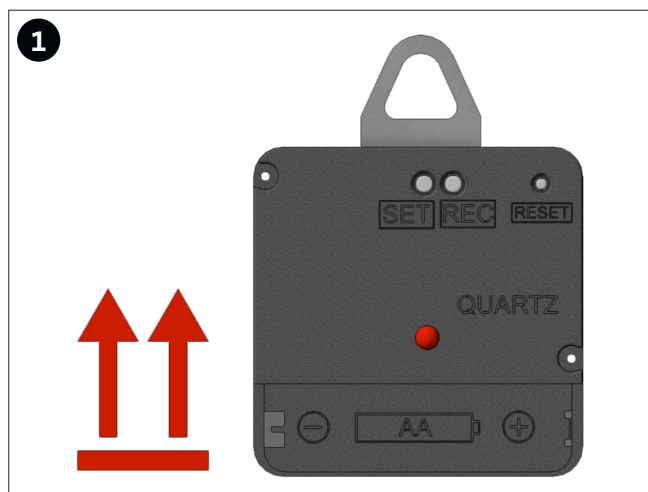
Additionally required:
Battery AA (e.g. 214.456)
Dial (5)

Set of hands (6)

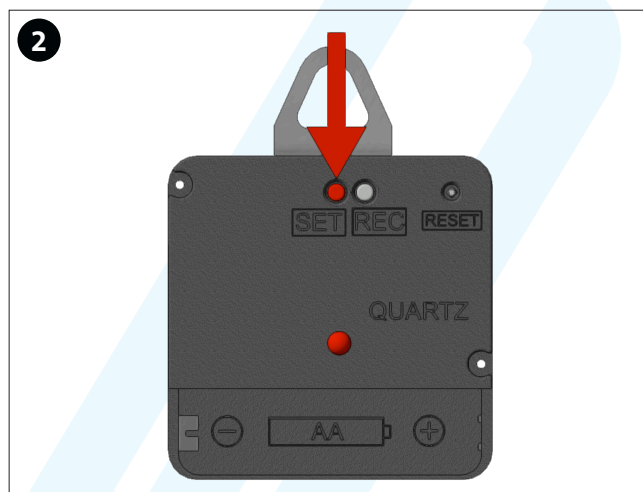
For a better overview, the following instructions are shown without a dial.

Please Note!

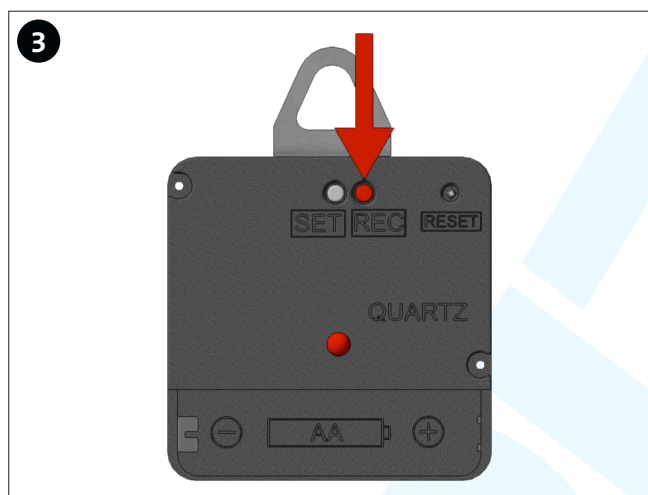
This radio-controlled clockwork is designed to receive the German time signal transmitter "DCF77" (transmitter location Mainflingen near Frankfurt/Main). In its reception area it will display Central European Time CET or Central European Summer Time CEST. It cannot be used in other time zones.



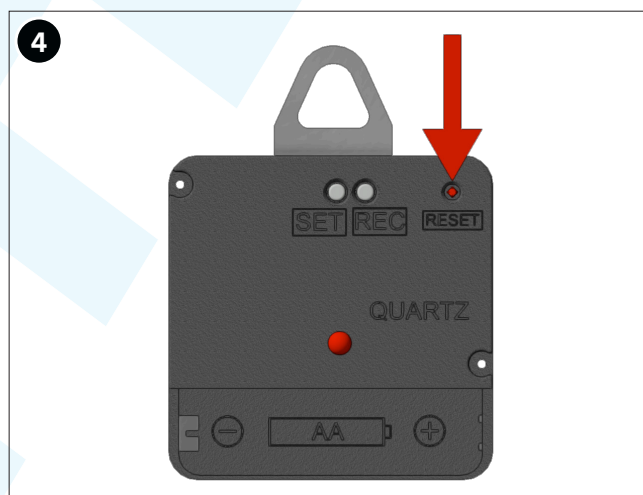
Rear view of the clockwork. Clockwork is aligned so that the writing is upright. Key explanation:



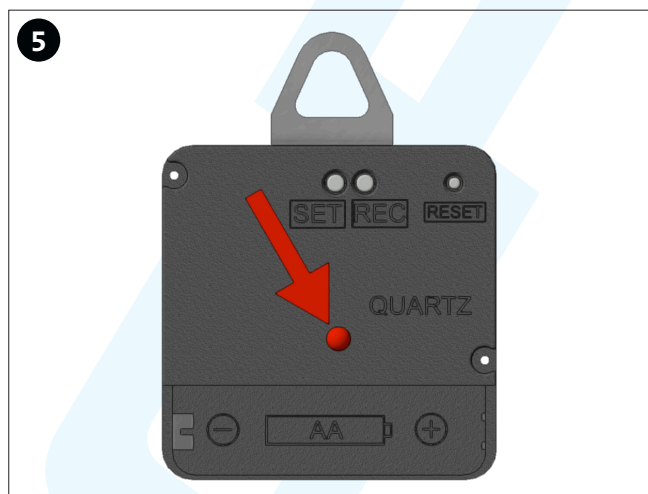
"SET" button: for manual time setting when the DCF77 signal (radio signal) is insufficient



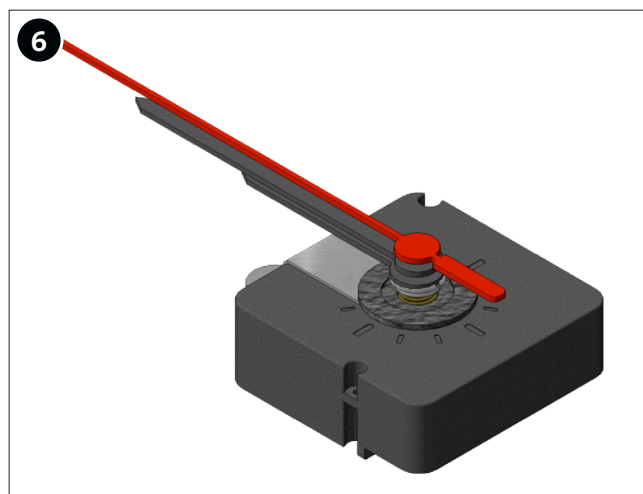
"REC" button (=receive): this forces an unscheduled synchronization with the DCF77 transmitter



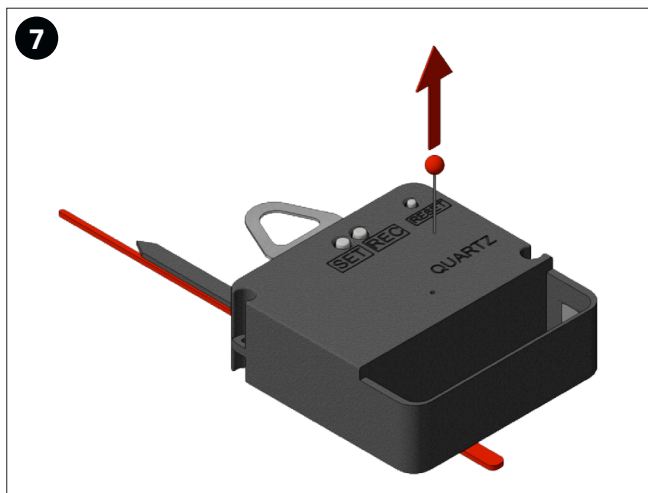
"RESET" button: restarts the movement, can also be done by removing and reinserting the battery



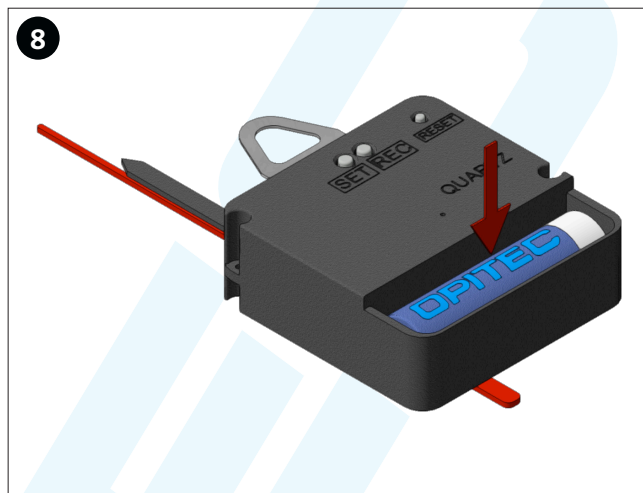
Transport lock. ATTENTION: only remove once the hands are mounted. NEVER insert the battery while the transport lock is plugged in! The clockwork will be damaged!



After the dial is assembled, the hour, minute and second hands are placed on the hand shafts in this order and aligned to "12:00:00".



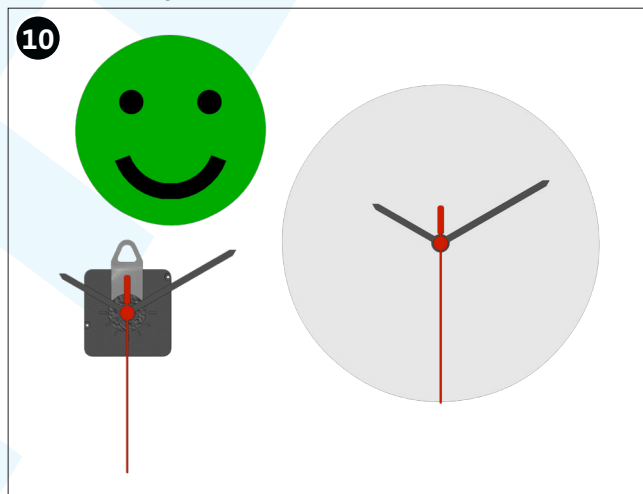
The transport lock is then removed and stored.



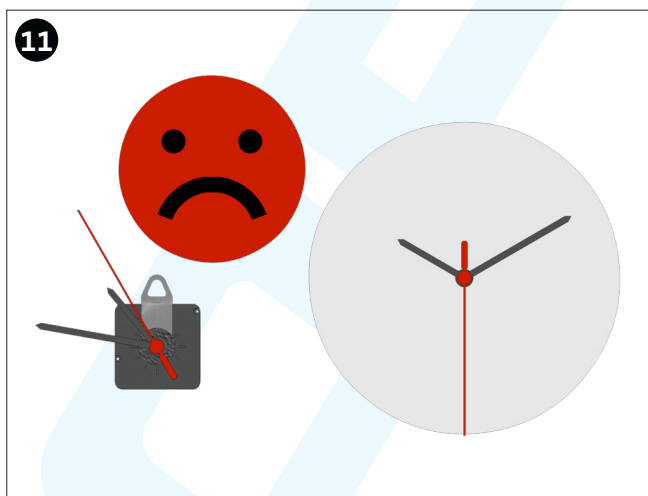
Insert the battery with the correct polarity and hang the clock in the desired location. The best reception properties are achieved when the clock face is facing Frankfurt/Main.



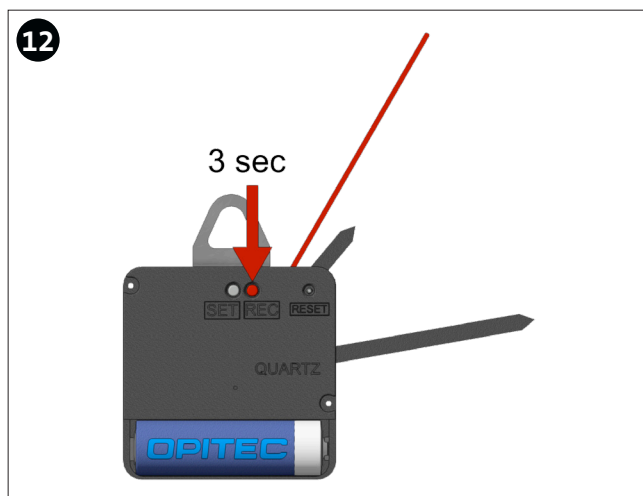
The clockwork begins synchronization with the DCF77 transmitter. The hands complete a few revolutions, stop for a while and then adjust to the correct time. Do not move or stop the hands by hand during this time!



Ideally, the correct time should now be displayed. Depending on the reception characteristics, this may take more or less time.

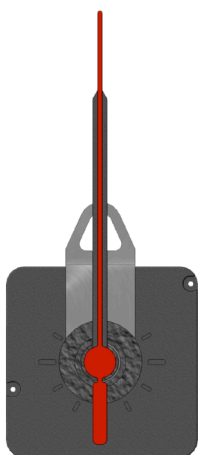


Troubleshooting. Clockwork is running, but after a long time the time does not match the actual time. Possible causes: no DCF77 reception or faulty synchronization (1) or hands have been installed incorrectly (2).



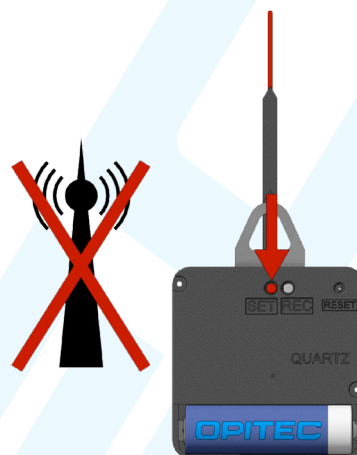
First trigger resynchronization by holding down the "REC" button on the back with a pen for about 3 seconds.

13



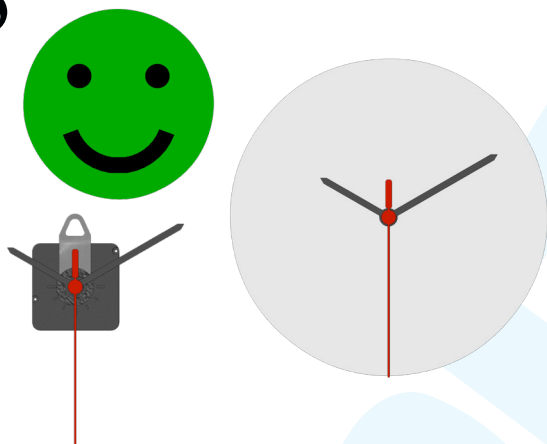
After a short time, the hands stop at 12:00:00h. (If not, continue with Figure 16, Solution 2) Solution 1:

14



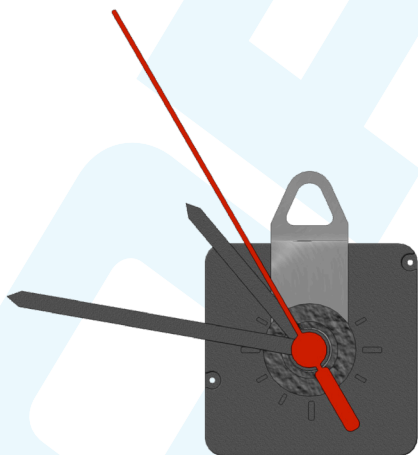
There could be reception problems. Select a different location for the clock (no basement or metal-shielded room, align the clock face towards Frankfurt/Main) and press the "REC" button. The clock can then be placed back in its original location. If this is not possible, the time can also be set manually.

15



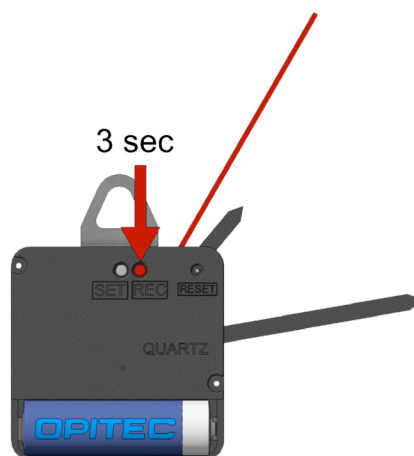
To do this, hold down the "SET" button until the correct time is displayed. The set time is saved approximately 5 seconds after you release the button.

16

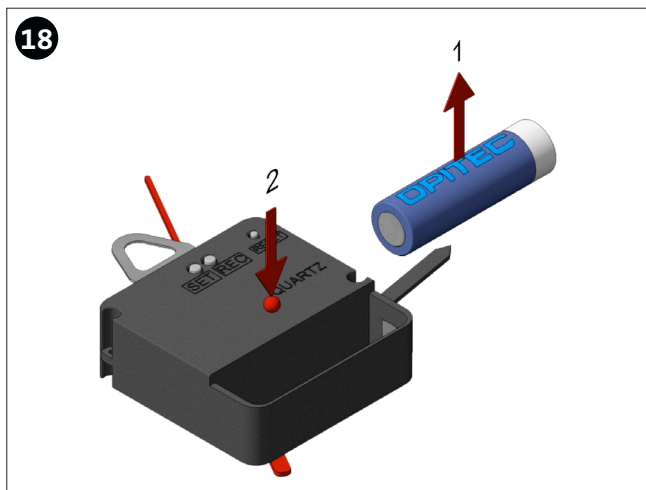


Solution 2, hands do not stop at 12:00:00h:

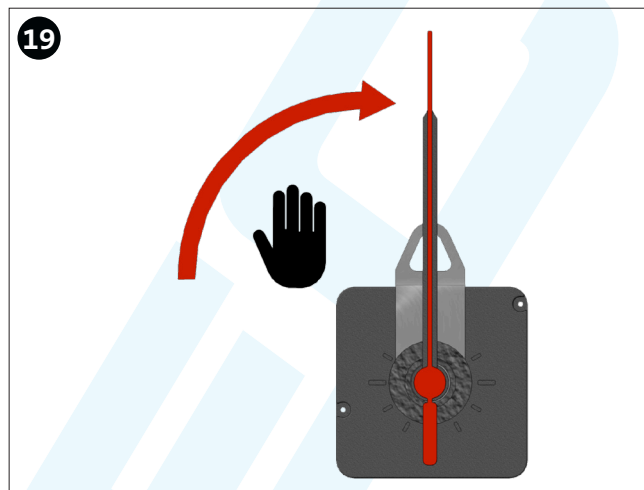
17



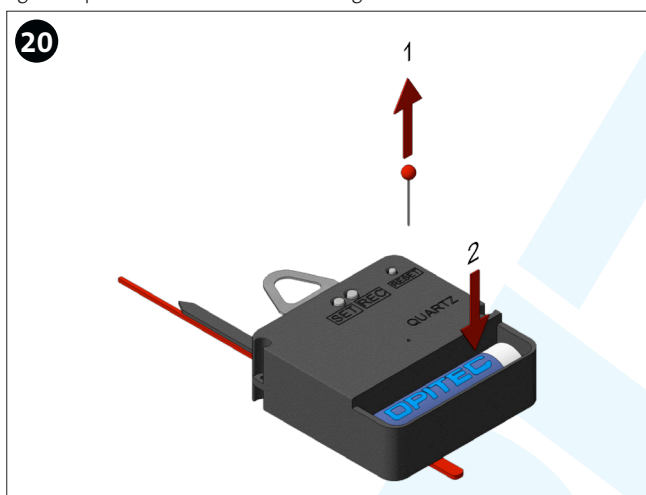
Press the "REC" button again and wait until the clockwork stops (!)



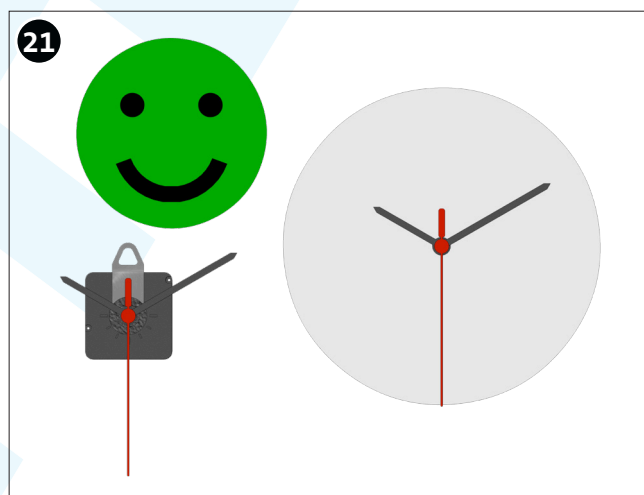
Quickly remove the battery and reinsert the transport lock. Be careful, it must be possible to insert it without using any force, otherwise start again at picture 17 and wait a little longer!



With the transport lock in place, the hands can now be turned on the hand shafts. Now set the hands to 12:00:00h by hand.



Remove the transport lock (IMPORTANT!!!) and reinsert the battery with the correct polarity.



After synchronization, the correct time should now be displayed.

Further information and technical descriptions on DCF77 reception: <https://en.wikipedia.org/wiki/DCF77>