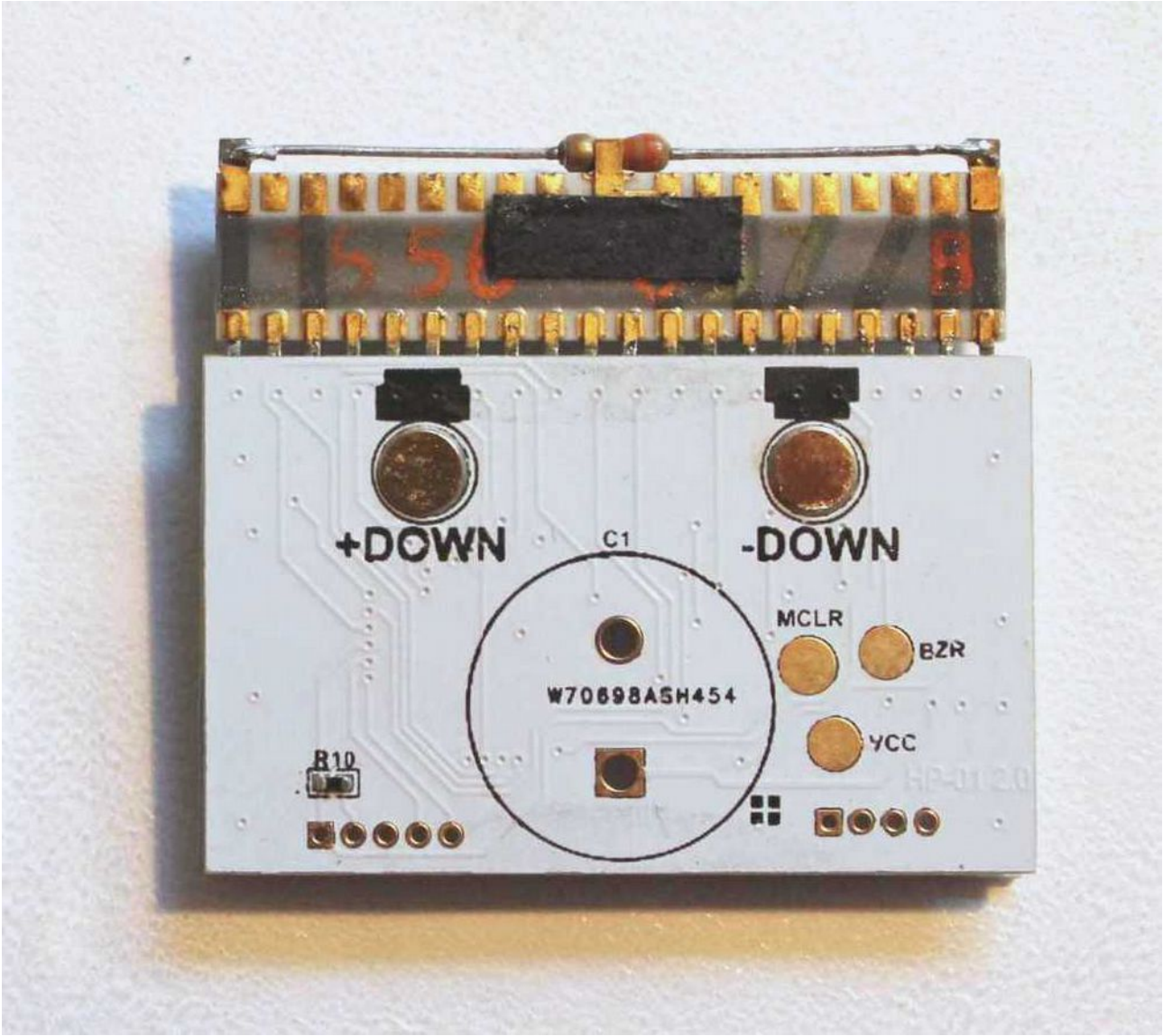
Applying gold plated battery contacts

Since 2025 there is an improved white „new HP-01“ PCB (Printed Circuit Board) available. Besides a new RTC chip and better mechanical construction it offers gold plated battery contacts.

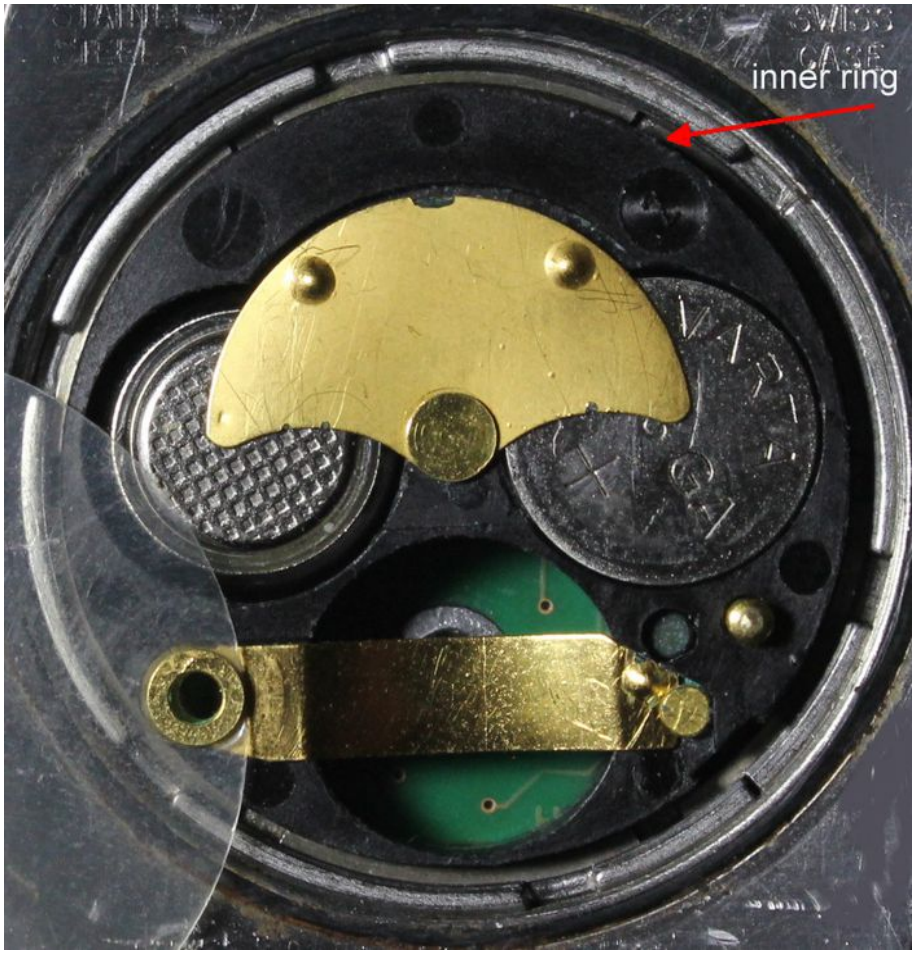


All customers, who bought the earlier green PCB had either stainless steel or brass battery contacts. Unfortunately these tend to corrode with time, especially on the negative - pole, which results in an unreliable battery contact. Often the date and time will be reset if the battery cells are shortly interrupted by a mechanical shock or they don't have contact at all.

Therefore I offer to all earlier customers gold plated SMD battery contacts, which you can solder by yourself instead of the existing old contacts. Please read this manual which describes how to replace the battery contacts.

PANAMATIK does not take any responsibility for using the described method here. If you don't agree, then don't proceed.

If you happen to have problems with your HP-01 battery contacts, please check first if it doesn't have a common different cause. Sometimes only the slotted inner ring is not fixed properly. This small steel ring presses the battery case and the batteries down against the contacts. If it is not screwed tightly, it can cause a voltage interruption. If you can press the battery case noticable down with your fingers, then the ring is not tight. Try to turn it clockwise with tweezers for one ot two more turns until it is fixed. If it was already fixed, you cannot turn it with normal force. Pay attention, that you don't turn the battery case away from its position while turning the ring.



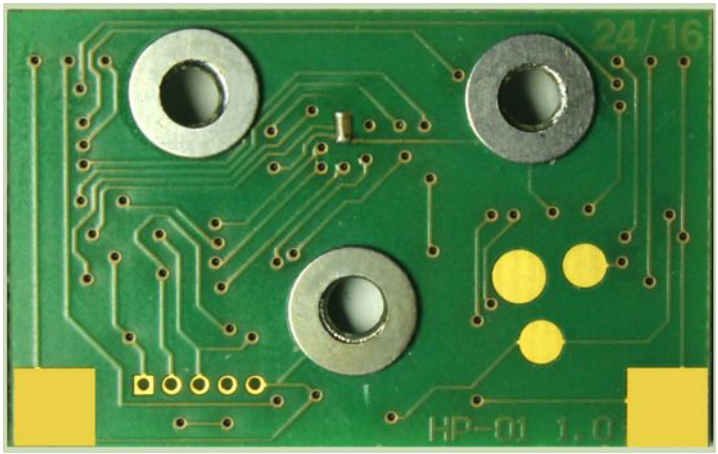
Disassembling the battery case

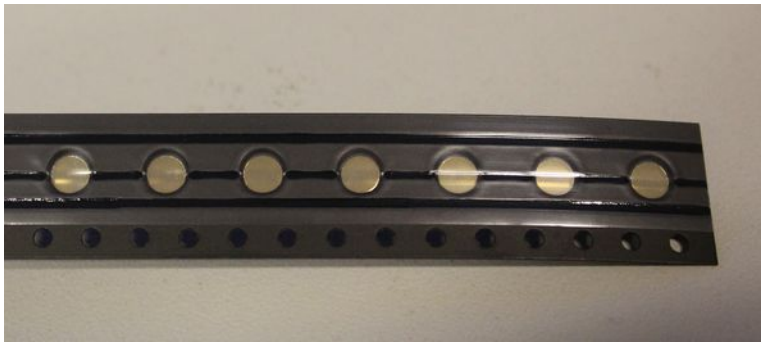
If you still want to replace the battery contacts, first remove the two batteries (please note, that the lower battery space will not be used and must remain free). Please also read the „new HP-01“ manual for getting more disassembly instructions.

If one of your contacts shows some coating and you experience contact problems, remove the inner steel ring by turning it counterclockwise with the two tips of tweezers, using the small slots, until the battery case can be lifted and removed.

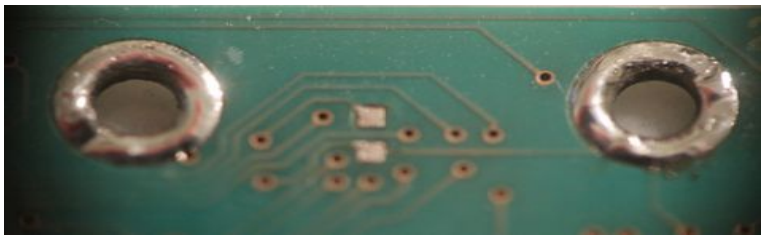
It is not necessary to remove also the outer ring (which is left threaded and must be turned clockwise!), but this would allow you to remove the complete circuit from the watch case and access the battery contacts more easily. But be aware, that removing and reinserting the circuit may be not as easy as expected, because the keyboard must be aligned properly within 1/10 mm to work correctly.

The old battery contacts can be removed just by heating them up with a soldering iron, placing its tip into the hole of the rings until the tin melts and the rings can be removed.



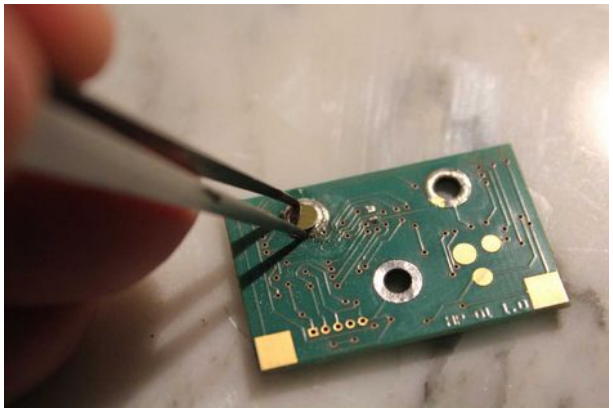


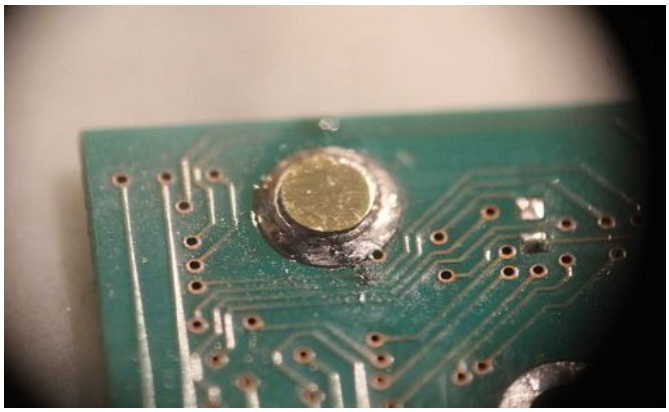
When you order the new contacts you will receive two gold plated small round metal sheets for surface mount assembly. In the image a whole strip of them can be seen.



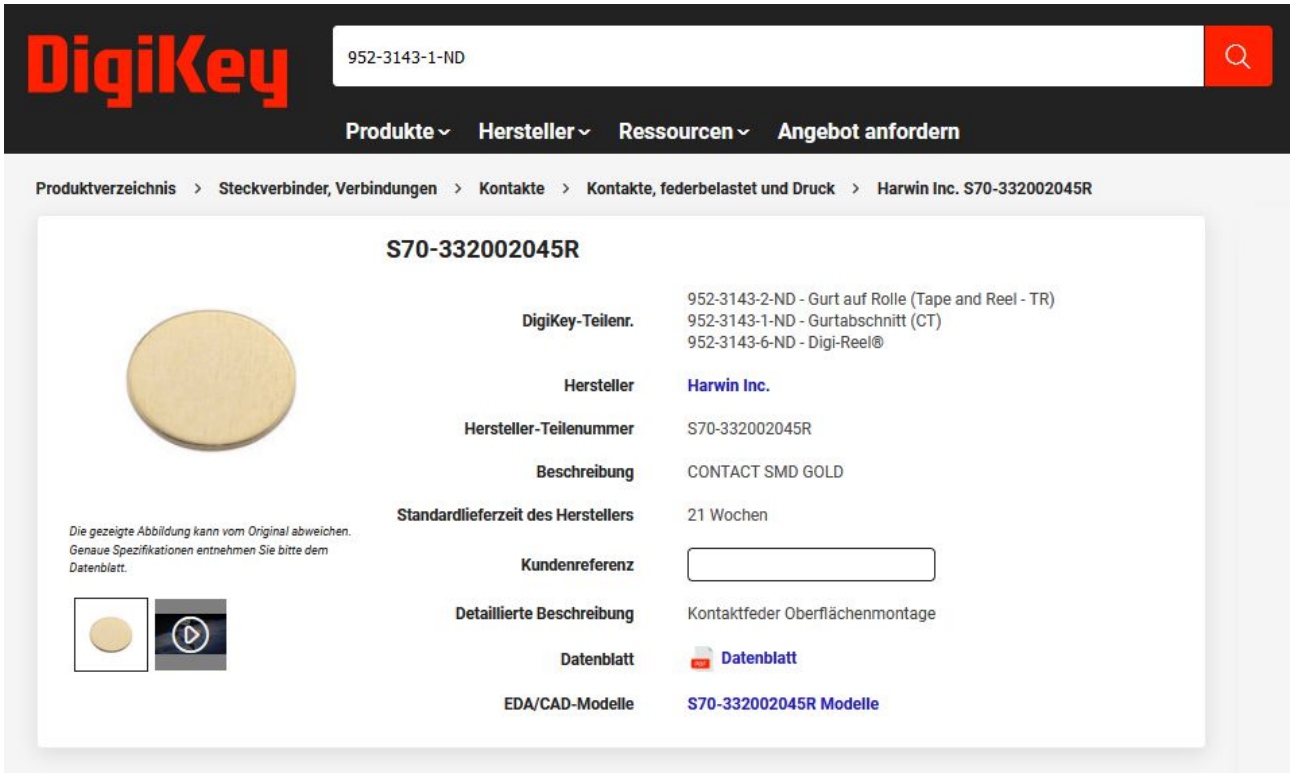
First apply some new solder to the upper two contacts as seen in the next image. Use copper braid to remove any solder, if you have applied too much.

The next step is critical: Place the gold contact on top of the solder with tweezers. Hold the tip of your soldering iron into the solder near the circumference of the gold contact, but don't touch the gold surface. Otherwise the gold plating will be covered with tin and will become useless. Even the slightest drop of tin on the surface will cause the battery to have contact with tin instead of gold. If all goes well, the tin melts and surrounds the new contact, it should look like on the images below. The gold sheet plane must be the highest point of the contact. Remove some tin with copper braid if this is not the case. Repeat the procedure for the second contact.





If you accidentally made the contacts unusable, this is not a catastrophic event, you can order these from DigiKey if you like, 952-3143-1-ND.



I wish you many years with your new repaired HP-01
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