

THE READER

The reader is, generally speaking, self-cleaning. It should also be noted that read errors are usually not caused by the reader, but by the moving parts. Usually the first two (small) bands are involved. Either the bands are worn/broken, or the rollers that these bands move about are not moving freely. See [bands.pdf](#) and [serviceMk4.3](#) respectively.

New style reader

The new style of reader let the cards slide on black surface (see illustration). Do not tamper with this type of reader as it does more harm than good.

The only thing that you might have to do is to remove dirt that can build up to the extent that it "blindfolds" the reader. See example (encircled in red) in illustration to the right below. Use Isopropyl alcohol NOT strong detergents that can dissolve the material. Please contact [support](#) if you cannot get it right.

Old style of reader

It could happen (even though it is not likely) that dirt on top of the lens could cause read errors, so you should know how to clean.

You can rotate (gently) a small cotton-bud in the hole on the top of the reader or you can use compressed air, but beware of highly pressurized air!

If the reading problems persist, the next step should be to take out the reader for cleaning.

0. Remove the cover.
1. Loosen the two screws on top of the reader.
2. Push the lever holding the reader backwards/downwards.
3. Remove the electric connection.
4. Push the reader downwards and pull it out.
5. Dismantle the reader (unscrew the two screws on top of it).
6. Clean the lens WHILE HOLDING THE READER UPSIDE DOWN with Isopropanol. Let it dry by itself.
7. Also clean the metal plate that the cards slide on with Isopropanol.
8. Mount the metal parts but do NOT tighten the screws.
9. Push the reader into position. Make sure that it has reached its final (top) position before you tighten the screws.
10. Compress the lever and push it over the reader.
11. Mount the electric connections.
12. Tighten the screws.

If problems persist, see [reader_problems.pdf](#)

New style reader has black sliding surface while the old style has a metal plate

