

If your book is slow

KOReader is optimized to work fast even on the limited hardware of e-book readers. Generally thousand page books can be opened in seconds and page turning is immediate. Here we will talk about the reasons if your book feels very slow when opening, page turning or adjusting its appearance.

If the problematic book is a PDF

- PDF file itself might be **too big for your device memory**.
- PDF file might **contain very large image files**. Even in documents with a normal text layer (which you can select and highlight) there might be another image layer embedded (generally a scan of the page). This slows down the opening and page turning because these large images has to be rescaled to fit on your screen and this process can be CPU intensive.
- PDF file might have **lots of individual elements** that needs precise positioning, like a magazine page with lots of images and text boxes. In this case KOReader has to calculate and draw all these elements which can take time.

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My PDF/DJVU files are slow

- If you set your **RENDER QUALITY to HIGH** while **REFLOW is ON**, text will be more pleasing but it can be much slower (up to several seconds for page turning) than **DEFAULT** depending on your document.

⬇️ BOTTOM MENU → → Render Quality

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- **Auto straighten** feature (which allows you to adjust the tilt of the page) might also slow down your reader.

If the problematic book is an EPUB

- EPUB files are basically composed of text and images with some rules to determine how these items are formatted on the screen. In ideal conditions, this is a fairly simple process so EPUB files are generally fast in KOReader. **But some EPUB books add a great number of formatting rules that KOReader has to do many calculations just to show even a single sentence.** This will slow down opening the book, turning the pages and changing the appearance properties like font weight or line spacing.

NOTE: KOReader doesn't support fixed layout EPUBs. They will open, but will render as reflowable EPUBs and probably won't look nice or readable.

- EPUB files are ZIP archives that contain HTML files. Some books can be a single HTML file while others may be composed of multiple HTML files like each chapter of the book is a separate HTML file. **If your book is only a single HTML file, partial rendering can not work.** So appearance changes will be slower than the divided chapter books, because for each change, KOReader still has to calculate the whole book instead of only the current chapter.

- Another rare cases of slowness is when the content is wrapped in a **HTML <table>**. KOReader has to render/draw each cell on each page turn, so if a cell (containing many paragraphs) spans 50 pages, this will slow down the rendering. See below for the solution.

If everything is slow

Reasons mentioned above is generally valid if only some of your books are slow. If all of your books are slow, your problem might be device related:

- Very slow CPU or low RAM.
- Your flash memory (where your books reside) might be degrading, which is generally due to the old age of the device.
- You are running out of storage space.
- If you are using an Android based device, your Android OS might be interfering with the operation of KOReader or some background processes might be using your system resources.

Solutions

Unfortunately, for bad PDF files there are not many solutions. Generally best solution with problematic PDFs and EPUBs is trying to find a better version of it. Or if another file type is available for download, like EPUB instead of PDF (or reverse) you can try that format.

Following solutions are for EPUB files and they might require advanced knowledge:

- You can set **Embedded Styles** to **OFF** in the bottom menu to see if ignoring all the document stylesheets makes it faster (of course, you'll probably lose any nice formatting, but you'll know what is the culprit).
- If you have HTML and CSS knowledge, you can inspect the HTML and the CSS files directly from KOREader and judge their quality or unnecessary complexity by yourself. To do this, you can long-press on some text and choose View HTML in the popup menu.
- If you have the "content wrapped in a <table>" problem as mentioned above in the problems section, you can add this book-specific style tweak: `table, tr, td { display:block; }`

TOP MENU >  > Style tweaks > Book-specific tweak

- **Calibre**'s e-book editor can check EPUB files for problems and has tools to fix some of the problems.

You can download Calibre from here: <https://calibre-ebook.com/>

You can see the instructions for the **Check book** tool of **Calibre** here: <https://manual.calibre-ebook.com/edit.html#checking-the-book>

- **EPUBCheck** application can check the validity of the EPUB files and detect many types of errors. You can read an example issue, where the problem is detected with EPUBCheck: <https://github.com/koreader/koreader/issues/11268>

You can download the command line version from here: <https://github.com/w3c/epubcheck>

Or download a graphical user interface variant from here: <https://github.com/w3c/epubcheck/wiki/GUI>

Opening an issue

If you are opening an issue about this problem, it is important for us to inspect the problematic file. You can share the file directly by dragging and dropping it on your message in the GitHub after compressing it as a ZIP file. If your book is an EPUB and you don't want to share the file due to copyright or privacy issues, there is a plugin for **Calibre** named **ScrambleEbook** which you can access the download and instructions from this page:

<https://www.mobilerread.com/forums/showthread.php?t=267998>

This plugin will read an un-DRM'd ebook file (EPUB/KEPUB/AZW3) and create a copy of the book with its text replaced with random characters. You can share this scrambled version with us in your issue thread. Text of the book will not be readable and there won't be any copyright violation but we can still use this file for diagnostic purposes.

Here you can see this procedure in a real issue involving a very problematic EPUB file as an example:

<https://github.com/koreader/koreader/issues/11465>