You got here via a link at AI7SI's website. It doesn't deserve a webpage all its own, but it may contain useful information for you.

Year by year, new editions arrive of <u>The ARRL Handbook for Radio Communications</u>[©], from The American Radio Relay League, Inc.™

If you look through the Handbook, you will come to realize that many hundreds, even thousands of hams have contributed to it over many years, even decades. Each year's editors do a good job, IMO, of consolidating a huge quantity of detailed information from multiple expert sources into chunks you can read and basically understand in minutes. This is the main benefit of the Handbook.

The 2023 Edition is now (in October 2022) available from ARRL's Store as a special, commemorative "100" (a century of editions) edition. There are several versions of this 2023 offering, hopefully with near-identical coverages. If I were buying the 2023 Edition to replace my Softcover 2017 Edition (which I will not be doing), I'd pick the 6-Volume Softcover version (1320 pages, versus the Hardcover's 1280 pages, that likely due to redundancies from volume to volume) simply because it is difficult to handle a 1280 page softback, though more inches of shelf will be needed.

Recent Editions from 2018-2019 and 2021-2022 are out there as well in online markets. 2020 seems to be missing. Used prices seem to vary a lot.

It can be difficult to decide to buy the Handbook at all, partly because of its price and partly because there are cheaper, much, much leaner guides to very basic knowledge useful in obtaining a US (FCC) amateur radio license, i.e. needed to pass the tests.

One must always ask the question, what do I need this (book) for, anyway? A good starting point for any decent decision. I did not get the Handbook until it was handed to me as a "bonus" item for joining ARRL for a 3-year membership. I joined at the ARRL table at the 2019 International DX Convention shortly after getting my license, and it was a really good deal, the best bonus item I've ever gotten for joining anything.

I will not include here the TOC of my 2017 Edition. This is a copyright concern. I wish I could find ARRL's own listing of the 2017 TOC, but I cannot. [I am a current ARRL Member, and I searched the website for one, consistently ending up at the 2023 Edition TOC, a link to which is below.]

I will offer a few numbers. Safety in numbers! The 2017 Edition encompasses 29 sections and 280 subsections of topics. The 2023 Edition has 27 sections and 262 subsections of topics. But essentially the same number of pages are in each edition. Clearly (to me at least), there is a reorganization of the material, possibly consolidating some of the earlier edition's material into fewer sections and subsections. Likely adding some new material, if only since six years has passed and things digital have become even more ascendant in the cutting edges of the hobby.

There's also a CD-ROM with this 2017 Edition, mirrored by access (on purchase) to an eBook version of the Handbook with the 2023 Edition. It was easily loaded (as something like a collection of pdfs) on my MacBook™. So not to worry about Windows™ versus macOS™.

I can commend the 2017 Edition as I own one and find it quite useful from time to time. This is not to say I think it is perfect. I find occasional shortfalls. One such, just for example, is a discussion of *audio* digital radio, e.g. AFSK, which I found too brief given the dominance of this technique in digimodes. But still, the topic is roughly described. Nevertheless, I do think it is a very good "launch site," offering start-up information when encountering a new term or concept. Much better than any dictionary, even one atuned to the area of ham radio communications. When you need more than what the Handbook offers, I think it's going to be off into specialized cyberspace or a focus topic (text)book, likely for any recent edition.

That said, many sections have a compact glossary of terms specific to the section topic.

Since I don't own the 2023 Edition, I cannot compare detailed coverage with the 2017 Edition. It would IMO be of little value to comment on whether each 2023 TOC section and subsection has a comparable one in the 2017 Edition. Both the section and subsection titles differ a bit overall, and a lot in a couple places. I'll note that one conspicuous case of reorganization (at the least) is in Test Equipment and Measurement(s), where the 2023 Edition breaks the material into 18 subsections versus 10 in the 2017 Edition. Who knows if the same material is in both, however? I did wonder about VNAs (vector network analyzers) since I use one here, and inexpensive handheld VNAs were new to the market in 2017. My 2017 Edition does cover the VNA in an introductory way. I wouldn't think the 2023 Edition would have any less coverage for this useful instrument. But, in other words, the 2017 Edition has some modern stuff, relative to ham radio, in it.

The Handbooks also point you with considerable references at the end of almost all sections to useful material to carry on beyond the Handbook. For example, the one in Chapter 11 on RF and AF filters of my 2017 Edition finally points me to A. I. Zverev's definitive <u>Handbook of Filter Synthesis</u> textbook, which I own and can say is more detailed material than most any ham, or even professional, is likely to need for electric *LC* and crystal filter design and use below microwave. I would, however, note that this area, RF and AF filters, illustrates one limit of the Handbook well. Modern radio design has increasingly used surface acoustic wave (SAW) filters, and the subsection on SAWs leaves a lot to be desired in rock bottom basics. It is only about half a page of the highest level description and an illustration, but never even mentions the shape of interdigitations approximating the impulse response of the filter's passband, arguably the most basic thing you can say about a SAW. And there is no reference to SAW at the chapter's end. So a reader is left hanging, not even sure why SAWs are (probably) not in their ham radio, let alone how they actually work as a filter.

But I will also add this. Chapter 19 of my 2017 Edition has a more detailed introduction to propagation at HF than I've found in several good online sources. Subsections include a nice

propagation summary by band from 160m to 70cm, a lot of basics on natural effects from the Sun. Nuances like Long (versus Short) Path F2 Layer are cleanly explained in a few words, this sort of thing so often simply assumed known to the reader elsewhere. The Handbook doesn't assume you're already knowledgeable about the basics. It takes you from "near zero" to "cruise" most everywhere you look. This is very helpful for new hams or those pushing their envelope outward. Putting the Handbook together with free online sources allows a pretty good understanding of both communication range and times of availability. Again, a good launch site for further study.

A used Softcover 2017 Edition of the Handbook can still be had as an online purchase for under \$50 (as of October 2022), whereas newer versions are more costly. The 2017 Edition consistently gets five stars. The only suggestive ding I found in reviews was that it was (my take on the reviewer's exact words) somewhat "older" information but still correct. Hey, it's that tons of older material that form your foundation for deeper learning. That reviewer still gave it five stars. I don't personally think the bulk of the 2017 material is "old" relative to the look-up needs of most hams. Sure, experimentalists out on the hardware, software or operational edge may not be using it as a primary source for detailed designs and activities. But that's not really the aim, as far as I can tell, of the Handbook. It's for "general coverage" of each of a great many facets of the hobby.

If you want to check out the 2023 Edition, go to ARRL's own listing of its TOC (https://home.arrl.org/PRODUCTFILES/2003373106/Handbook%20100%20Table%20of%20Contents.pdf). If I had just recently (re-)entered the hobby now, I might well spring for its six-Volume Softcover set, also offered at the organization's Store (you don't have to be a member) for less than many prices of used earlier editions. I just happen to be happy with the 2017 Edition, that's all.