Practical Radio Frequency Test and Measurement: A Technician's Handbook

Joseph Carr
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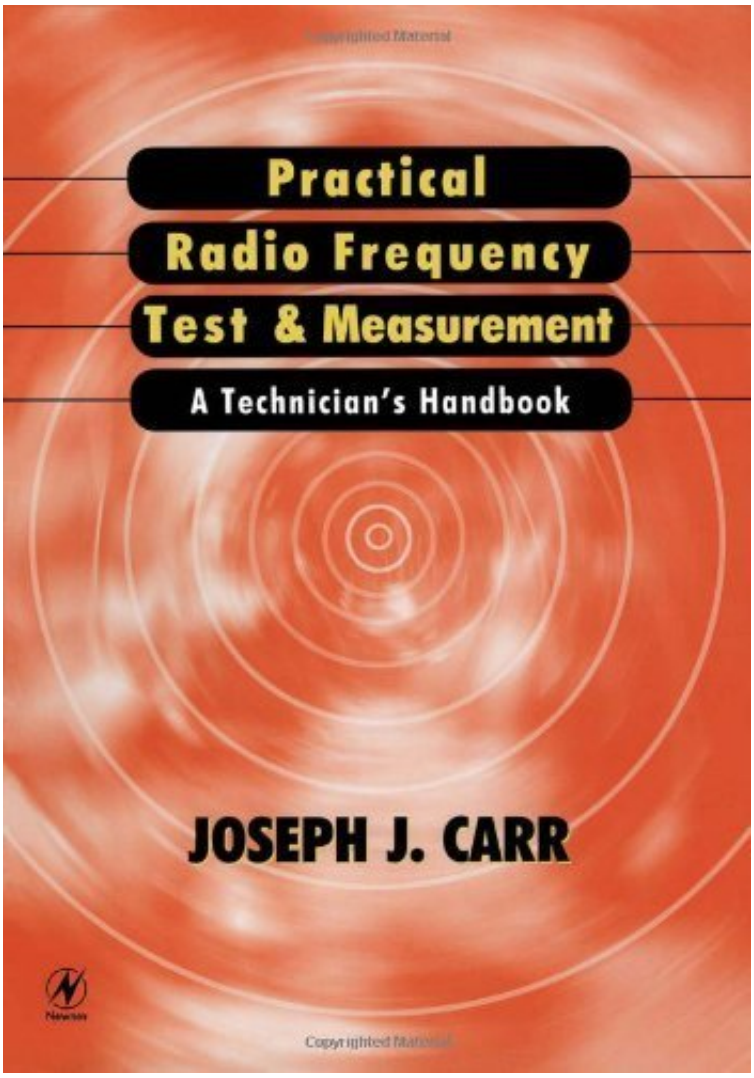

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Joseph Carr : Practical Radio Frequency Test and Measurement: A Technician's Handbook before purchasing it in order to gage whether or not it would be worth my time, and all praised Practical Radio Frequency Test and Measurement: A Technician's Handbook:

9 of 9 people found the following review helpful. Good Handbook, Light Design Info,, solid reference materialBy CustomerGood GENERAL test guidance throughout, with handy formula to tie you back into the theory of what is actually happening. Although there are some of Joe Carr's books I don't like, this is one I definately do and highly recommend for anyone involved in the testing of RF devices, especially those which have to test and work with a

diverse product set.For more in depth circuit analysis, see Chris Bowicks "RF Circuit Design" or for more basic info, check out Jon Hagen's "RF Electronics". If you need PCB guidance, head over to Tim Williams "The Circuit Designers Companion" and if you need more magnetic or HAM type info definately get Jerry Sevicks "Transmission Line Transformers".0 of 0 people found the following review helpful. excellent book on the subject.By MorsiThis book is Really that's what i was looking for.At a reasonable price compared with the other hard cover crappy expensive books which i returned all.Pages stuffed with great illustrations and practical setups and experiments.I loved this book from the first sight, lol.1 of 2 people found the following review helpful. why i wrote thisBy Jesse E. ShawTest equipment ranges from what I used a lot back during WWII (a neon bulb) and computerized stuff that costs well over "" $100,000I have made my own of almost every kind of test equipment from bulbs and probes to multichannel scopes.When working on the first and still in service real ICBM computer boards, because there were restrictions to how you were allowed to "probe" them the manuals I created explained how the basic $5000 Tektronix RM545 scope with different plugs and probes specified by the board designer could give you any answer you wanted to know.Today available as surplus the Tektronix 7603 scope is reliable and with an array of plugs will do any thing I usually want to know.You can even plug in a pair of sampling plugs that do microwave signalsHow beautiful is it to be able to probe a resistor end to end and watch on the screen the voltage and wave form developed across it. Any decent lab grade scope will do that for you.Where you want to see a one cycle per second wave form on a hundred volt above ground level you need a vertical plug and a time base that will do that.It is not going to happen with almost any digital scope today under $10,000. The Tektronix 7603 with 7A13 plug will do it with sensitivity down to 1 millivolt per division. There are less expensive ways to do it and this book can help you with that. but precision will not be there.as the $7000 cost is what you paid to get this done back in 1969.An HP 141-T with plugs will show you spectrum characteristics from 10 cycles per second to light. I don't own the light plugs but do own plugs that do own the SUB AUDIO TO MICROWAVES plugs. Most anybody can afford the usual stuff that does LF to Microwaves but there are problems of weight and space to be considered as this thing is big and heavy. The 10 to 300,000 cycle plug I got by accident from a Canadian vendor when I bought their complete instrument. I had never seen one offered before that but today you can buy a real operating and service original manual for$103 and $350 plus shipping on Ebay. The 8556A Spectrum plug is very rare but will show you any signal from audio to 300,000 cycles of any magnitude above whatever noise floor exists with appropriate external attenuators capable of the needs when it comes to signals up to 0db or so. This is a tool few people have but this book will help you get around the problem of not having an infinite budget. If you want to study electromagnetic radiation created during earth quakes or from atmospheric electric discharges. you will need some equipment in the ULF to VLF range and this can be built by anybody if you are willing to sacrifice the really neat find details.The first test equipment was designed to take advantage of the fact that along any conductor carrying current of any magnitude there will be a voltage drop between any two points regardless of distance. Any conductor has resistance at 70 degrees F.Looking for a load that is causing trouble is where this becomes important Simple test equipment can steer you to the source of this load. Most or what this book will teach you is things you will want to measure after you have achieved the education needed to know you have a problem.This book gives you information on how to make or buy what you need and why it will be useful to whatever degree.Ford won his first big start up money by using a more reliable machine as opposed to a faster machine. This is an important lesson.The faster things go the more likely they are to fly apart. Microwaves like 10 ghz will not stay where you put them.to get them from one place to another you use plumbing rather than wires. Test and measurement of radio frequency things is where you find out about the way they will not stay where you want them.Knowing how these important tools of the trade are used and getting insight of how they are used and misused is useful for the beginner and even for me who has been using the stuff for over 65 years. I still make mistakes and some of them are expensive.Anybody can blow up an RF volt meter if you don't follow the rules. The important things to know is why you are "there" with the tool and what the worst that can happen might be.Nobody I know has a perfect record of going to the problem and finding the cause as by looking at the effect without making a mistake.This book gets a little hairy with the math but it is necessary if you want to know how you measure some things.You can measure propagation of a transmitting antenna with a 40 watt fluorescent lamp and a lot of room or you can do the math.Knowing a little generally cuts the investigative time.by days. Some of us learned the hard way of what works and what will not.With antennas for instance getting the voltage and current where you want it and achieving the radiation angle to get the energy directed to where you want it to go or come from, can be done by math or you can play with it until you know you have it right.I developed a 39 inch 28.5 mc mobile antenna by testing math perfect antennas of various lengths against each other until I found the correct angle to enter the ether and get my 10 meter transmissions anywhere on the planet when a path was available using only 5 watts of upper sideband power. You cannot do this with a kilowatt if the radiation angle is grossly wrong. My tools were a Heath dual wattmeter and a year of my time. Math might have made this more easy but generally I dislike a function where I do not ever get exactly what I want and is incapable of showing progress. A / B comparison tests are where you learn that no two electric elements are born equal. Even if you were very careful when you made what you thought was exactly the same.This book is useful in explaining what you need as opposed to what you do not need and to what degree. as well as how to

avoid being "FOOLED".Some very important stuff to know

Practical Radio Frequency Test and Measurement will teach readers the basics of performing the tests and measurements used in radio-frequency systems installation, proof of performance, maintenance, and troubleshooting. Practical Radio Frequency Test and Measurement teaches readers the basics of performing the tests and measurements used in radio-frequency systems installation, proof of performance, maintenance, and troubleshooting. Anyone interested in gaining more practical proficiency with RF, whether engineer, technician, amateur radio buff, or hobbyist, needs a copy of this book. Joseph J. Carr, himself an accomplished practitioner in this field, examines the instruments used in the various types of measurement before moving on to specific measurement methods. Carr includes information on basic theories of RF measurement, as well as test equipment, test set-ups, test and measurement procedures, and interpretation of results. Provides immediate applications for anyone who works in or is interested in RF technologySuitable for beginners, intermediate-level users, and advanced usersWritten by a prolific expert in the RF field

"...should be included in every communications technician's essential library." --Mobile Radio TechnologyFrom the PublisherAnyone interested in gaining more practical proficiency with RF, whether engineer, technician, amateur radio buff, or hobbyist, needs a copy of this book. Joseph J. Carr, himself an accomplished practitioner in this field, examines the instruments used in the various types of measurement before moving on to specific measurement methods. Practical Radio Frequency Test and Measurement includes information on test equipment, test set-ups, test and measurement procedures, and interpretation of results.About the AuthorJoe Carr devoted his life to furthering a wider understanding of electronics and spreading his passion for radio, becoming one of the USArsquo;s best known technical authors with over 25 books and hundreds of magazine articles to his name. Newnes is proud to have published a number of his recent titles, including his last book, RF Components and Circuits.