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Book Descriptions:

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You are probably here because you want to know how to assemble a computer. Well dont worry, We got you covered. In this manual you will not only learn how to assemble a manual, you will learn The main components of a PC and its purpose Good price ranges for each component Good options for each component Cost breakdown for building a PC Safety for assembly How to wire a PC Where each component goes This will all lead up to you assembling your very own computer while learning various facts about the components of the computer. Good luck on your journey through my guide. Add Tip Ask Question Comment Download Step 1 Gathering the Parts The first essential step in building a computer would be to purchase the necessary parts to create one.The parts are divided into tools and components for the computer. You must also use the correct tool for the task, using a tool not suitable for the job can damage the components and equipment. Using a knife to turn a screw can damage the screw itself. When picking out specific components you must research whether or not your parts are all compatible. For example, an Intel processor must be compatible with specific motherboards. Purchasing an Intel processor and a motherboard which isnt compatible with the processor will result in the components not working. The motherboard is one of the main components, this will dictate what type of RAM you should purchase and which brand of processor you should purchase. Typically, an average day computer wouldnt need much RAM, 8GB would be enough. Processor CPU The brand of the CPU will depend on which compatible motherboard was chosen Intel or AMD. A good Intel processor would be the Intel Core i57400 Kaby Lake QuadCore 3.0 GHz LGA 1151 65W BX80677I57400 Desktop Processor and a good AMD processor would be the AMD RYZEN 3 1200 4Core 3.1 GHz 3.4 GHz Turbo Socket AM4 65W YD1200BBAEBOX Desktop Processor. In 2018, 12TB would be sufficient for the average user.http://www.aquaculture-engineering.com/upload/8310r-manual.xml

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The MSI Radeon R7 250 DirectX 12 R7 250 2GD3 OC 2GB 128Bit DDR3 PCI Express 3.0 HDCP Ready CrossFireX Support Video Card and the Gigabyte Ultra Durable 2 GVR523D31GL rev. 2.0 Radeon R5 230 Graphic Card 625 MHz Core 1 GB DDR3 SDRAM PCI Express 2.0 Lowprofile Single Slot Space Required would be great options. Add Tip Ask Question Comment Download Step 3 Understanding the Components Just hold on a minute. You cant start building yet, you must first understand what each component purpose before building. By understanding what each component does, it will benefit your building skills and computer knowledge. Now you might know main components such as the Video Card and the CPU however, there are many more components that are often underlooked. Below are components of the computer which you should know the purpose of CPU Cooler A device that repels heat away from the CPU chip as well as other hot chips such as the GPU which stands for the graphics processor. Heatsink A cooler which absorbs and blows away heat and is made up of aluminum. The fans are placed above heat sinks to prevent a hotrunning CPU chip. Used to make sure these chips don’t overheat Closed Water Loop This is used to prevent loud noises from the computer, it is used to directly cool the chips causing the case fan to run very slow. After this, water is pumped from the external radiator to the CPU, to the graphics card GPU, to the flow of the indicator in front of the actual case and back to the radiator it’s a cycle. The RAM is referred to as an unstable memory and the memory is automatically deleted once the power has run out. RAM Random Access Memory The Random Access Memory is another form of data storage in

PCs. This form of data can be accessed randomly at any time you like, in any order and any physical area. For example, hard drives are where the physical area of the information determines the time taken to recover it. RAM is typically measured in megabytes MB and the speed is in nanoseconds.http://eiepl.com/userfiles/8320hd-manual.xml

Motherboard The motherboard is the “the brain” of the computer and is easily the most important component within the computer. The motherboard has the most crucial components in it to help the computer properly function efficiently. Hard Drive The hard drive of the computer stores all the installed software, photos, documents, and more. The hard drive is very important to the computer and to even you. If the hard drive were to be damaged or broken, anything you had stored onto the actual hard drive such as photos, software, programs etc.This may be true, but, the difference between the Hard drive and the RAM is that the Hard drive memory is permanent, whereas the memory on the RAM is temporary. So, if you were to open your computer with an actual hard drive, all of your saved data would still be stored. These can be found usually at the back of the computer, sometimes on the side. Northbridge The northbridge regularly handles communication between the RAM, CPU, BIOS, RAM, and the southbridge. Some northbridges also contain builtin video controllers also can be referred to Graphics and Memory Controller Hub and Intel frameworks. Since many processors and RAM require distinctive signalling, the Northbridge can just work with just a single or two classes of CPUs and as well as a single RAM. Southbridge The southbridge can normally be recognized from the northbridge by not being associated with the CPU. The northbridge binds with the southbridge and to the CPU. PCI Express A standard form of connection for internal components in a computer. They refer to the expansion slots on the motherboard which accept PCIe based expansion cards and to the types of expansion cards themselves. EEPROM Battery The EEPROM battery is a type of battery which can be used to power up many of the components in the computer. The EEPROM battery is located on the motherboard and gives supply to the ROM and other components within.

Add Tip Ask Question Comment Download Step 4 Ensuring Safety Hold your horses. We are almost at the building stage but, there is still one more step before we can begin the building process. We must first ensure we can build the computer safely and without any problems. The first thing you need to do before assembling your computer is that you need to find a place to work Well spaced out area. Places like wood desks or plastic covered tablecloths are the best places to work on. Also, keep in mind, you should always handle a computer in a clean and nonmetallic workspace So you can avoid being electrocuted. Before you start working on a computer, make sure all your parts are in a clean area and not covered in dust or rust, also make sure none of your parts are damaged. Also, make sure your hands are dry to avoid damaging any mechanical parts as well as to avoid electrocution. When removing any cables, wires, or ribbons, make sure to hold onto the wire at the head to keep it from breaking. Work with the wires smoothly instead of roughly to keep them in good condition the same thing goes with every other hardware because we don’t want anything to get damaged. Before starting, press the power button located at the front of the computer multiple times to discharge the electricity. Always wear an antistatic wristband while building your computer. you can see the steps below for the antistatic wristband. Keep sensitive components in the antistatic bags that they come with, and only remove them from the bag when you are ready to install that component avoid damaging or losing your components. Add Tip Ask Question Comment Download Step 5 Installing the Motherboard Now you are finally ready to start building. To do this, open the side panel of the case by unscrewing the screws. Some computer cases do not require any unscrewing to open the side panel. It is best to follow the individual process of opening the side panel by following the instructions given by the producers.

If there is any sort of packaging materials inside the computer case, please remove it before installing any hardware components. The picture above gives a more detailed view of where the

screws are located. The xs in the image above represent the screws for the heatsink, make sure not to confuse the heatsink screws with the motherboard screws. Add Tip Ask Question Comment Download Step 6 Installing Hard Drive, Power Supply and Case Fan Now that you have installed the motherboard, it is time to install other main components that work in unison with the motherboard. First, you will install the Hard Drive this is one of the easiest steps. Once you have placed the HDD into the drive bay, install the screws to make sure the HDD doesnt move. Install the power supply is similar to installing the Hard Drive. Align the mounting holes for the power supply with the power supply itself. From there, insert the screws in the mounting holes and tighten. And as you probably guessed it, installing the case fan is the same as installing the Hard Drive and Power Supply. Find the mount for the case fan, align the case fan with the mount and screw in the screws. Add Tip Ask Question Comment Download Step 7 Installing CPU, RAM and Heatsink We are almost done assembling the computer. Now we have to insert hardware components into the motherboard so all parts can work in unison. To install the RAM, it needs to be placed carefully into the designated RAM slots, after this, make sure you lock both sides to connect it to the motherboard. The CPU is then placed carefully right after, also make sure to blow on the CPU before placing it because dust can get into it. It is also recommended to apply thermal paste on the CPU for better performance. Place the CPU in the designated slot and close it using the latch.

For your final task for this step, you will need to put the heatsink on top of the CPU and screwed back into the 4 corresponding holes Add Tip Ask Question Comment Download Step 8 Wiring the Components The hardest part for most people is the wiring. The most common mistakes are made when putting the wires back because of all the similar ports. You will find a thick grey wire called SATA which go in the SATA ports blue. Connect the power bank wires into the white sixwire socket which is located to the right of the SATA ports green. Above the SATA ports, there is a square shaped four socket port. The optical drive wires are placed in that yellow. Beside the RAM slots, you will find two colourful ports. Place the two large black wires in the yellow and blue ports purple. There is a thin bundle of wires that are flat. Connect those into the white pins directly to the right of the white sixwire socket black. The final thin bundle of wires goes into the lonely fourwire socket located on the far side where the RAM slots and CPU are located red. Add Tip Ask Question Comment Download Step 9 Wrap It Up. Once all wires are placed, check to make sure the motherboard is placed in perfectly and all screws are in tight. Pull down all components and make sure they are in tight. Make sure no damage is done to any components and your computer should be assembled. Now all you have to do is screw back in the side panel and then your good to go. Plug in your keyboard, mouse, and monitor to test if any problems occur. If so, consult individual component manuals for specific troubleshooting information if problems persist. Add Tip Ask Question Comment Download Share it with us! I Made It! Recommendations Slack Status Updater With ESP8266. Modern computers become more affordable when users supplement their monetary investment with a few hours of effort. This computer build will be very basic and will be the minimum hardware necessary to have a functional system.

After you have all of the parts and materials needed, it will take between 2 and 4 hours to assemble your computer and you will need to be able to use simple hand tools, such as a screwdriver and a pair of pliers. Add Tip Ask Question Comment Download Step 1 Procuring Parts First you will need to buy the parts necessary to build the computer. The parts we will use in this project are labeled in figure 1 1. Processor CPU 2. Computer Case 3. Optical Drive DVD RW and SATA capable 4. Memory RAM 5. Power Supply 6. SATA Cables 7. Motherboard SATA Capable 8. Processor Fan 9. Case Fan 10. Hard Drive SATA Capable 11. Assortment of case and drive screws Not Pictured 12. Flowers necessary if you are invading the space of your significant other Most, if not all of these parts can be

bought together in what is known as a “barebones kit”. There is an obvious financial advantage to buying parts bundled together, but less obvious is the benefit you will realize from the amount of time you save trying to research parts compatibility. Caution Double check the manufacturer’s specifications on all items before you purchase them. Kits are supposed to contain compatible parts, but mistakes can happen. Add Tip Ask Question Comment Download Step 2 Gather Tools and Supplies Normal 0 false false false ENUS XNONE XNONE MicrosoftInternetExplorer4 Warning Using incorrect tools for a task such as turning a screw with a knife blade can cause equipment damage and bodily injury. Add Tip Ask Question Comment Download Step 3 Open the Case Open the computer case by removing the side panels. Find the screws that hold the side panels in place and remove them shown in figure 3 circled in red. The panel is removed by first sliding it back figure 4 then lifting it away from the case figure 5. Warning Case may have sharp edges. Handle with care to avoid injury.

Add Tip Ask Question Comment Download Step 4 Prepare the Case for Assembly On our case, we will be removing the cover on the highest drive bay to mount our DVD drive as shown in figure 7. Do this by pressing in the retaining tabs shown in figure 8. These should be front panel connections for features such as the power switch, audio jacks and usb ports. If they are not labeled, consult the manufacturer’s documentation and label them yourself now before other parts are installed in the case figure 8. Add Tip Ask Question Comment Download Step 5 Ground Yourself Put the grounding strap on your wrist Figure 10 and connect the other end to the computer case. If your strap is not equipped with a clip to hook to the case, find a place to wedge against the metal as shown in figure 11. This will prevent any buildup of static electricity on your body from damaging the computer components. Caution Static electricity can ruin computer components. Always wear a grounding strap when handling any internal components. Add Tip Ask Question Comment Download Step 6 Install Motherboard It should be included with the motherboard. Figure 12 shows the contents of the motherboard box. The screws install into the standoffs as shown in figure 13. Screws and standoffs should be included with the case, but it is a good idea to order these items just in case they arent included. Follow these steps to install the motherboard in the case. It pushes in from the inside. The standoffs screw into the motherboard mounting holes shown in figure 14. Check the screw hole locations on the motherboard for exact placement. Figure 15 shows the motherboard installed in the case. It works best to leave the screws loose until all of them have been started and the board is aligned with the bezel. Caution To prevent damage to the motherboard it must only contact the standoffs and screws. All of the standoffs and screws must be installed. Add Tip Ask Question Comment Download Step 7 Install Hard Drive.

If that is not possible you may need to connect cables before you install the drive. To mount the drive. If you have trouble finding a place to mount the drive consult your case documentation for suggestions. Cable access considerations apply to this drive also. To install the drive Make sure that it is orientated correctly. It is installed on the motherboard in the socket shown in figure 20.To install the CPU On this AMD brand processor, the corner is marked with an arrow. Consult the manufacturers documentation for specific information about your processor. Add Tip Ask Question Comment Download Step 10 Install RAM Permanently stored data is pulled from disks and stored in RAM while the processor works with it. The memory is easy to install Check to see that the notch in the board is in the correct location. If it is not, turn it around 180. Make sure the tabs lock into place as shown in figure 23. Caution Pressing the boards in when the tab is not aligned could cause damage to the RAM boards as well as the motherboard. Add Tip Ask Question Comment Download Step 11 Install the CPU Fan The unit draws heat away from the CPU. To install the fan Consult the manual to determine proper placement. Add Tip Ask Question Comment Download Step 12 Install Case Fan If the fan mount is not obvious consult the case documentation. To mount the fan The fan needs to be mounted so that it blows air out of the case. Add Tip Ask Question Comment Download Step 13 Install Power Supply Add Tip Ask Question Comment Download Step 14 Connect Cables It is

important to consult the motherboard manual in order to make sure proper connections are made. There are two kinds of connections, power and data. In figure 27, the power supply connectors are shown. The motherboard has two power connections, and there are two connectors specifically for SATA devices drives. The other connectors will run fans and other nonSATA devices.

Please consult the motherboard documentation for the exact placement of connectors. Warning Incorrect connections can damage components and cause bodily injury. Add Tip Ask Question Comment Download Step 15 Wrapup Now that the components are completely installed, the last thing to do is to reinstall the side panels on the case. The computer is now ready to be turned on and to have software loaded on it. If the computer has problems starting up, check all component connections and mounting to make sure that you have hooked everything up correctly. Consult individual component manuals for specific troubleshooting information if problems persist. Add Tip Ask Question Comment Download Share it with us! I Made It! Recommendations Refrigerator Magnet Clock I get information from this. Thanks for this type of post. 0 Ganesh Manduri It also makes less noise;D. It can be read and the data can be written into it.\n \n ROM It is also randomly accessed. It is only read memory unit. It works in electronic speed but the device attached to it works in \n \n low speed. IT \n \n establishes well coordination between other four functional units.\n \n CU It is the unit which controls the flow of information through the processor and \n \n coordinate the activities the activities of other unit which are within it. So it is the brain \n\n \n within the brain as it controls what happens inside the processor. It process the information and instruction and then send the processed \n \n information to the output device.\n \n Motherboard It is the main circuit of PC. It contains the interface for the microprocessor, \n \n BIOS Memory and storage device need to control peripheral devices such as monitor, \n \n keyboard, mouse etc.\n \n RAM It stores data temporarily. So it is called volatile.\n \n HDD IT is a secondary storage device for permanent data storage device i.e. placed in the \n \n system. It is similar to human brain where all the past to present events are stored.

\n \n DVD RAM The Digital versatile disc stored digitally. \n \n A DVD writer is a DVD player as well as a writer.\n \n FDD It is a n external storage device. It is magnetic round disc enclosed in a plastic jacket.\n \n Today we have double size high quality to density disk with 1.44 MB of size.\n \n Keyboard It is a primary input device of the PC similar to type writer. \n\n \n Mouse It is used to point to the desired position in the computer. It is also an input device.\n \n UPS It is the device that produce supply to the PC. It provides all the time of power cut. Check to see that the notch in the board is in the \ncorrect location. The power supply connectors are \nshown. The motherboard has two power connections, and there are two connectors \nspecifically for SATA devices drives. You can find the plug by following the wire from the \nfan. Next, you will have to unscrew the fan from the \noutside. You should now be able to lift the fan out of the PC. \n\n \n Step 4 Power Supply\n \n The power supply supplies power to every component in a computer, unplug every wire \ncoming from the power supply.Pull on the tab, then \nslide the slot out. To remove the hard drive from the side of the slot, unscrew the four screws \nsecuring it in place.\n \n Step 07 Expansion Cards\n \n Expansion cards are like small upgrades to your computer.\n \n Expansion cards give a computer new capabilities, once installed. Different examples \nareBluetooth,Wireless Internet,Ethernet,TV \n\n \n Step 08 Connectivity Centre Cables\n \n The connectivity center is the area on the front of the computer where there is many input \nsections, like usb, firewire, microphone, headphones, video, etc. I wont remove the whole \nconnectivity center in this step, but I will unplug all the cables coming from it.\n \n Step 09 RAM Random Access Memory\n \n RAM you have, the faster your computer runs. Most computers have 4 RAM slots, and two \nRAM chips.

To remove the RAM, push down on both tabs holding the RAM in place, which \nare located at both ends of the RAM. Please see the pictures.\n \n Step 10 Motherboard \n\n \n The motherboard links every component in the computer together. The CPU, RAM, and \nexpansion cards are attached

directly to it, and every other part of the computer is in one way \nor another attached to it.The basic components of a PC areIt can be read and the data can be written into it.It is only read memory unit. It is non volatile in nature.It works in electronic speed but the device attached to it works in So it is the brain within the brain as it controls what happens inside the processor. It generate timing signal and It contains the interface for the microprocessor, So it is called volatile.It is magnetic round disc enclosed in a plastic jacket.Mouse It is used to point to the desired position in the computer. It is also an input device.It provides all the time of power cut. So Find the screws that hold the side It should be included with the motherboard. The standoffs screw into the motherboard mounting holes. Check the screw hole locations on the motherboard for exact placement. It works best to leave the screws loose until all of them have been Step 7 Install Optical DriveCable access considerations apply to this drive also. Install the screws.It is installed on the motherboard in the socket Consult the manufacturers Check to see that the notch in the board is in the Step 10 Install the CPU Fan. The unit draws Consult the manual The power supply connectors are The other connectors will run fans and other Please consult That includes the following Antenna, Cable TVYou can find the plug by following the wire from the. Next, you will have to unscrew the fan from the Step 4 Power SupplyThe list below is everything that I had to disconnectFirst, unplug the ribbon from The portable. Pull on the tab, then Different examples I wont remove the whole Most computers have 4 RAM slots, and two.

RAM chips. To remove the RAM, push down on both tabs holding the RAM in place, which Please see the pictures.The CPU, RAM, and The motherboard has seven screws holding it to the frame, which. Consider keeping a container nearby to hold loose parts like screws. You may also want to quickly skim over the relevant sections of the manuals for the individual parts you’re about to assemble. These are typically included as a paper insert in the product packaging. If you’ve ever shocked yourself from static when touching a metal object, that’s what this is referring to. By following good practice I.e. Grounding yourself to remove any static buildup, it’s very unlikely that you’ll have any issues with ESD. You can do this often throughout the assembly process to discharge any electrical potential you may have built up. If you get worried, simply discharge yourself to the computer case by touching it with your bare hands again. Sometimes you may not be able to fit your screwdriver where it needs to be if other parts like the CPU cooler or RAM get in the way. Don’t forget to ground yourself by touching the case before working on assembling parts. Most cases will come with a few different packets of screws and they may have different sizes or threads, so make sure to match them up with the correct mounting locations as best as possible. If in doubt, refer to the documentation which came with your computer case. Gently place it straight down into the motherboard socket to seat the CPU Avoid touching of pressing down on the back of the CPU with your fingers, as any residue from your hands can destroy the heat transfer surface for the cooler which will be mounted next. Usually there is a piece of removable hard plastic somewhere around the CPU socket cover which serves to protect the CPU terminal pins on the motherboard. Be sure to remove and discard this as you install your CPU.

We’ve heard stories of installations where the plastic packaging on the CPU socket cover which is meant to be discarded after CPU installation was not removed, and the CPU cooler was mistakenly mounted to the plastic. Don’t make this expensive mistake, as this will cause overheating and damage to your CPU. To identify the correct header, look for the labeling on the motherboard; they are always labeled next to the header with the intended connection, for example Others may have sockets for cables to be plugged in. We find it easiest to connect the power cabling for each hardware component to the power supply as you assemble the PC rather than waiting until the all parts are assembled and plugging in all power cables at once; we do it this way so that you won’t accidentally forget to connect power to any device. The tabs should automatically latch closed as you press the RAM down, securing the RAM in place If you are installing pairs of RAM sticks, mount them in the same color slots on the motherboard. If you have decided to use the onboard graphics of

your motherboar instead of installing a dedicated graphics card, you can skip this section. Line it up and press down firmly to seat the card. This ensures you are actually using your graphics card! The exact mounting strategy for storage drives will vary from computer case to computer case. Fix the drive in place with screws through the case frame into the case mounting holes located on the storage drive The data connection cable is a SATA cable which connects between the motherboard and the storage drive. The power connection cable supplies power to the drive, and plugs into the drive from the power supply. Some people choose not to include an optical drive in their PC build if they don't plan on using optical discs. Again, the data connection cable is a SATA cable which connects the optical drive to the motherboard.

The power connection cable supplies power to the drive, and plugs into the drive from the power supply However, you will still need to plug the power cables of these fans into a header port located on your motherboard. This supplies the fan with power which is required for it to operate. These will be present in the form of cables that come from the front panel; the ends of which will be hanging loose in your case. You'll need to hook these up to the appropriate locations on your motherboard. Use the following list as a guide for what goes where After a final check to ensure there are no loose screws floating around in your case, and that all cables are clear of any moving parts, it's time to power on your new computer. The below video from Newegg TV is an excellent guide to building a PC and indexed into easytofollow sections. Understanding Your Computer Hardware Muzamil Afridi on What Parts Are Most Important For A Gaming PC. Understanding Your Computer Hardware Cookie information is stored in your browser and performs functions such as recognising you when you return to our website and helping our team to understand which sections of the website you find most interesting and useful. This means that every time you visit this website you will need to enable or disable cookies again. But you eventually mustered up the courage and bit the bullet on ordering the perfect list of PC parts for your needs, and theyve finally arrived at your door. Excellent choice my friend. While getting a premade PC isnt the end of the world if you do your research and pick a decent value desktop from a good company, theres no escaping the fact that building your own PC has many advantages over buying a prebuilt system. Overall, its well worth the little extra time and effort to learn how to assemble a PC yourself, and youll be glad you did once its all over and your new custom PC is up and running.