

Building a New Computer and Installing Linux Mint
CUGG Presentation by Ron Mettler May 11, 2013 with
Assistance from Steve Mokray and Bill Osborn

Background

Steve Mokray and I decided that we needed a new challenge and new computers for related reasons. I had been looking at Linux Mint as an operating system and had installed it on several 8 year old IBM desktop computers, on an old laptop and a couple of other older computers. I felt the system was very complete, easy to transition to from Windows 7, and included all of the programs that I needed. Steve had run into some problems with an older machine that had Windows 7 on it. He needed to use his Windows 7 install disk but could not find it. Shortly after that Bill Osborn had a Windows XP computer that developed a bad motherboard. The three of us ordered parts from TigerDirect.com and Amazon.com, assembled them, installed Linux Mint and are now operating with new very fast desktop computers.

What is Linux Mint?

Linux Mint is a complete operating system with a graphical user interface very similar to Windows 7. There are several variations of Mint available, but we chose Mint Mate 64 Bit to go with the hardware that we had planned to purchase. The iso file that is needed for producing a bootable DVD is available for download at <http://www.linuxmint.com/download.php>. We chose the 64 bit version with multimedia support. The 64 bit version is used with motherboards and CPUs that support a 64 bit system. The 64 bit system also allows for full use of memory exceeding 3.2 MB. In our cases, our systems included 6-core processors and 8 GB of RAM. The basic installation includes LibreOffice which comprises Word Processing, Spreadsheet software, Presentation software, Draw software, Data Base software, and Math formulas software. LibreOffice is compatible with the latest versions of Microsoft Office. If you have been using Windows 7 and do not wish to go to Windows 8 then Linux Mint is an excellent alternative.

Purchasing Procedure

Steve and I purchased bare bones kits from TigerDirect.com. My hardware is detailed in a separate document named **Ron's Mint Computer Components Purchased from Tiger Direct**. Steve purchased a very similar kit with a different case and without a hard drive. He ordered a separate solid state hard drive (SSD) for his system. The details of his kit are also shown in a separate document.

Bill Osborn had an existing system with a bad motherboard but a good case, 500 watt power supply, a DVD writer and a DVD ROM. He purchased a new motherboard, two 4GB memory modules, a six core CPU and a 128 GB SSD, (same as Ron's and Steve's).

Assembly Procedure

1. Unpack the motherboard, memory modules, CPU and the CPU fan. Take care in handling the components to prevent static buildup. Do not touch contact and chip pins. Lay the motherboard on the anti-static bag that it was shipped in. Install the CPU taking note to match the marked corner with the socket marked corner. Install the fan/heatsink on the CPU and secure the clamps that hold the fan snug to the CPU. Install the memory modules. If two modules are being used install them in matching color memory slots (usually #1 and #3). For
2. Carefully press the cutout back plane plate for the motherboard into the case. Mount the motherboard inside the case taking care to line up the motherboard back connectors to the back plane plate. Use the screws furnished to secure the motherboard to the bottom of the case.
3. Referring to the motherboard layout details, plug the connectors that connect the front of the case to the motherboard. Note the wires and connectors usually include a plug for the on-off switch, a power LED connector, a hard drive activity LED, and one of more USB connectors.
4. Mount the power supply and connect the 24 pin connector to the motherboard. Note that some power supplies have a 20 pin plus a 4 pin power connector that join each other and plug into the motherboard. There is a separate 4 pin power connector that also plugs into the motherboard in another location on the board.
5. Add the hard drive to case and plug the appropriate power supply cable to the hard drive and plug the signal cable from the motherboard to the hard drive.
6. Mount the DVD drive in the case and plug the two cables to it as was done for the hard drive.
7. The computer is ready to power on as soon as the keyboard, mouse and monitor connections are made. For additional details see the following web site for video instructions - <http://www.homepcbuilder.com/> Note that Tigerdirect.com and Newegg.com also have instructional videos for computer assembly.

Mint Software Installation

1. Download the iso image file from the Linux Mint site and burn the iso image file to a DVD.
2. Be sure to have an Ethernet connection to the new computer or when booting with the DVD you may connect to a wireless network.
3. Set the BIOS to boot to the DVD first or click on the appropriate function key to select the Boot Menu options. The system should then boot into a Live Linux Mint screen.
4. Double click on "Install Linux Mint".
5. Select the desired language (English is the default), the click on continue.
6. On the next screen, you may choose to install Mint and use the entire drive or you may select "Something Else" then click "Continue". Selecting "Something Else" allows for

partitioning of the hard drive in a custom way. See my separate document for custom portioning the hard drive named “Mint Partitioning Suggestions by Ron Mettler”. If you do not pick “Something Else” proceed as follows.

7. Pick your time zone in the next screen and then click on “Continue”.
8. On the next screen leave the keyboard layout selection as-is and click on “Continue”.
9. The next screen asks for your full name, computer name, user name and password. For computer name use something like Mint64Bit or in my case I used RonMint64Bit.
10. You can select Log in Automatically or Require Password to log in. In any case, a password prompt will occur when ever you make system changes or add new programs. Whichever option you pick is up to you.
11. Click on install and the system will be installed to your hard drive. My installation took about 20 minutes. When it is complete a pop up window will appear allowing for reboot and removal of the install DVD.
12. Your system should start and boot into Linux Mint.

First things to do after rebooting

1. Install updates by clicking on the update Icon in the lower right task bar. When the first single update displays, click on the arrow titled “Install Updates”. Repeat the process to install an additional 116 or more updates. The process takes about 20 minutes.
2. Click on Menu in the lower left corner, the select “Software Manager”. Search for chromium and install it if desired. Search for other programs such as googleearth, mahjongg etc. and install as desired.

Future Plans for Linux Mint Instructional Sessions

If there is sufficient interest Steve Mokray and I will consider holding one or more SIG sessions at the Senior Center to explore and learn Mint related topics.