We take you step by step through repairing laptops.
Step By Step Tutorials

NVIDIA GPU REBALL PROCESS

Now Available On CD/DVD !!!
Laptop & Computer Repair Course
+ 1000 Motherboard Schmatics & Software!
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This is the Hp Dv 6000 with blank screen display
This is a fully comprehensive instructional course in getting into the business of repairing all makes of laptops. As well as all that, we also have our support team to answer any questions you may have in a full range of subjects. The Course is full of resources for buyers of any of the courses.

The students has access to a huge range of tools, software including business and web design software. We also have links to laptop and PC suppliers, parts and accessories in the UK and USA

**Advance Chip-Level Module**

Chip-level Training will be customized for your present knowledge of electronics. If you go through the fundamental track, all the power electronic components will be introduced before we move to the logics section. After you become comfortable with power electronics the logic session follows. It is an intensive coverage into the intricate details of chip-level service of the laptops. This involves detailed circuit tracing, signal analysis, replacement of SMD devices and all the tips and tricks our service engineers acquired from the years of experiences. the session makes you confident enough to chip-level service the new generation notebooks from Lenovo, Compaq, HP, Toshiba, Sony and the like.
Service Technicians entering into the Laptop training course must have experience in the following disciplines

- must be comfortable in using desktop systems and peripherals
- must have an above average knowledge about all the internal components and operation of the system
- comfortable with installing and managing various operating systems.
- managing the hard disk subsystem with formatting and partitioning.
- installation and configuration of computer components like add-on devices

Ready To Learn A New Skill Online?

You must spread flux around the edge of the chip

Now position on the reball machine for chip removal

Q: Would love to know how you diagnose motherboards on a component level. What tools do you use?
A: I find it is very hard to explain this. actually, it is very simple and can be described in two words: current and signal. read the current change during booting tells you where the machine stopped. check the signals on the different part of motherboard tells what is wrong or what may missing.
The chip has be removed from the motherboard

Clean and add the new balls to the chip

**Tools are:** smd rework station, bga rework station, power supply has current meter. all the rest tools you can find in any radio tv repair shop.of course all the datasheets for the components, especially the schematic diagram, you will find it much difficult without it.

**Q:What are common faults on mainboards?**
Do certain components fail? Is there a trend as to which parts fail quite often?

**A:** Different maker/model has different common fault.
Toshiba S1 is vga chip, and can't be repaired(well, almost can't be repaired because the pcb quality is not very good so successful rate is very low).
HP DV2000, 6000, 9000, compaq v3000, v6000, dell 1210, all those use nvidia chips have problem on vga chip or north bridge. easy to repair but have to make fan keep spinning after repaired, otherwise will break down in 1 or 2 week again.

hp nx5000, cpu pwm chip dry joint. acer 290, cpu pwm dry joint.
hp dv1000, compaq m2000 protection circuit easy to blow up.
ibm t40 vga dry joint problem.
These are just few of them. every machine has its own common fault. but dry joint is the common problem for all machines. Motherboard repair is not as difficult as people thought, i think much easer than repair a tv.

**Q:Dell 1525 Inspiron that says system does not recognize the installed battery this system will not charge the battery.**

**A:**Charging battery in Dell laptop involves two major chips: EC(or someone call it super IO), PWM chip for battery charging. BIOS has no part of charging. Battery communicate with EC through SMB(system management bus??) and EC controls charging PWM. Fix charging problem is very hard in laptop repair, you must fully understand schematics, where all the signals come from and where to go.
Today's laptops are less and less with programmed EC, Dell 1525 has no programmed EC so it can be replaced with same model.

**Q: How i fix a DV6 with power problem. The problem of**
machine is it cannot power up at all.

Doing routine check:
1. system power: 3V, 5V all presented - ok
2. NBSWON signal: 3.3V presented - ok
3. press power button, NBSWON pull down to 0V, ok
4. check DNBSWON while press power button, no response. - problem.

in here I made a mistake, I didn't pay attention of the voltage of DNBSWON, this mistake waste me the next few days time. It should be 3.3V, but only about 1V.

Change EC as usual, because I thought the EC has problem. Then the big trouble comes - it auto power up once I plug in the power but stop in 0.04A current. Check and find no S5_ON signal, which indicate south bridge has problem, so change south bridge. But still same problem and still no S5_ON. I find that the EC I change is kb3926A rather than kb3926C. In most case, this is no problem but in very rare occasion...

So I find a 3926C and put on. Now the motherboard is back to the same problem while I first start to check! So I change a wrong EC and this time I change a correct one, and also EC has no problem!

Because EC will start to read bios once the power plug in (not as people think, once you press power button). I check BIOS chip, BIOS_CS should have a countinue wave form but it just one stright line. BIOS chip is faulty, I replace the BIOS chip and it works perfect.

Read More

Course Contents

Motherboard Overview:
Main Signals of Motherboard And How motherboards Work with Different ic

- Define different Laptop problems
- Common Laptop Notebook Chip
- POWER SUPPLY CHIP
- IO CHIP
- CPU power supply chips
- Charge discharge control chip
- CPU temperature control chip
- Graphics Brand
- Ethernet chips

Laptop Motherboard Ic chip Removal Process

How to replace tiny ic chips in a Laptop motherboard.

Look at Burnt ic chip on the motherboard.

The laptop would not turn on.

- Sound audio Chip
- PC Card Chip
- COM port chip
- Keyboard-chip
- Keyboard chip
- Battery IC :
- Memory control chip
- Clock IC :
- Icd back light control
- Ddr memory power supply
- Other Common chipset
- Mosfets Used
- Crystal (14.318 Clock )
- Connector Socket(display, battery, dvdrom, modem, keypad, touchpad, onoff panel etc)
- Fault finding and troubleshooting of motherboards
- Tracing different connectors and socket with related component and chip
- Testing and using of different components
- Dc to dc power regulator sections
- Power supply to different chips vcc core, 5vsus, +1.5v, 1.8vsus, 5v, 10v, 2.5v
- Cpu core voltage, vid signals, vrm section, mosfet of vrm
- Clock generation circuits
- Bois chips section, rtc chip
- Power good , reset,frame, clock, bios signals
- Fault finding and troubleshooting.
- How to read different component datasheet.
- Basic cleaning and washing method of motherborad
- Smd component pratice removal and inserting different components
- Training using cro osciloscope
- Finding fault using cro osciloscope
- Use of debug card post error code
- Finding fault using post debug card
- Training using eeprom programmer
- Bios update using eeprom programmer
- Training using bga soldering station
- Removing bga chips and rebolling it using reball stencil
- Ics rebolling, bga ball arrangement, pratice
- Training using solder batch
- Removing socket & connectors using solder bath
- Bios password, ibm, dell password removing steps
- Searching data sheets of different ics
- Common problems of different motherboards
- Equipment/Tools used for Laptop Repairs
- Motherboard Voltage Regulator Circuit
Closer view of the burnt ic chip....

Bad chip needs to be replaced.

Learn how to replace bad ic chip on the laptop motherboard

IC chip is soldered to motherboard and the laptop now works fine.

if a chip is dead just replace it !!.

Advance ic chip removal process

How to remove ic chip with 102

- hdd repair
- How an image appears on the Lcd screen
- How I installed external Bluetooth adapter inside a laptop
- How To Bypass Windows 7 Logon Password In 3 Steps
- How To Fix Failed Nvidia Chip
- How to fix hardware problems without taking apart the Laptop
- How to replace battery cells inside laptop battery
- How to test a laptop or a desktop computer memory
- Steps to Hacking Dell D600 Bios Password
- Top 10 Things to Consider When Selecting a Digitizer x Oscilloscope

Full Course Contents

Convenience :
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Certificate :
A Certificate of Completion will be issued at the end of course duration
1st) Remove the chip

The chip is removed then find the same chip from another motherboard.

Place Flux around the new chip in
order to help with the soldering.

The contacts need to be free of solder so the pins can’t short. Use the soldering iron to brush away excess solder from the joints.

The old chip is removed. The new chip is now in place.

*Ensure that the version number on the old chip is the same as the new chip.
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