• God forbid you should send the drive to a 'Data Recovery' place...

From: P. Christensen

- Go to bios and ask the machine to automatically detect the hard drive. Sometimes it loses the
  hard drive due to a virus or faulty battery.
- If the machine finds the hard drive, go in and do a virus scan. If the battery made the bios lose
  the info, you shouldn't shut off the machine until the hard drive data files are backed up. Monkey
  B virus will alter the boot sector and make the hard drive disappear.
- Sometimes you have to be sure that in bios the machine will boot to A and then C and then
  make sure it has recognized the C drive in bios and then do a virus scan.

From: Murray Voight

- You need to be able to boot into the system.
- First get a generic boot disk that will allow this.
- If you're able to boot up, then see if you can access the C drive through DOS.
- If you can access the C drive, then you should be able to access the files on the C drive.
- If you can't access the files, then try running a scandisk from the boot floppy.
- If you can't access the BIOS or the C drive through a boot disk, then the next step you need to
  do is shut down the computer and pull out the hard drive.
- Once you have the hard drive out you need to douse it in lighter fluid and immediately expose
  the non-functioning hard drive to an open flame.
- Although the last step is of great controversy, it will bring great satisfaction to know humans will
  always have the last word.

From: Howard J. Castello

Boot from floppy drive and then try running fdisk/mbr.

From: Andrzej Bednarz

The answer to the hard drive question is more complex than you may think, but the bottom line is
that you really need to know how damaged is your hard drive or rather how much functionality is left
in the hard drive.
- First, I would try to approach the problem by distinguishing if it is a hardware or software issue.
  If the problem is software-related, for example, the operating system is corrupted, the hard
  drive can be attached as a "slave" and the important data copied to the "master" bootable drive.
  Many times that approach can be used even for hardware-related problems, for example, when
  the hard drive is getting flaky, but it's not broken yet.
- It is a lot easier to prepare yourself for the broken hard drive, but to really motivate yourself for
  any preventive steps, you'd have to answer the question: would I be still OK if my hard drive
  crashes today? Also, how much time do I want to spent for a data and/or system recovery?
- Over years, I was developing many different methods of data recovery and backup, therefore the
  following is the fastest and probably the most reliable method of doing so. First of all, install the
  OS with all the associated programs and utilities including MS Office, Internet browsers, etc.
- When you test everything and you're sure that everything is the way you want, you can take an
  image of your hard drive by using Norton Ghost.
- For the files that you create from now on until next computer crash, create a folder called
  "data" and in that folder subdirectories for MS Office, PhotoShop, etc.
- From now on, all you have to do is to backup your "data" directory to the CD and copy the
  Ghost image to the second CD, and if you need to restore your system, it would take you
  anywhere from 5 to 20 min to have everything back where it was.
- If your hard drive snapshot image is bigger than 650 MB, choose option to compress the image
during the process. If after compression the image is still bigger than 650 MB, you can split the
  image on as many chunks as you need, for example 20 chunks to backup 13-GB hard drive
carry with me. I let the customer put in a password so they feel secure in my not looking at their data. The above is predicated on the fact that the drive will spin up. If it doesn't, I sometimes have luck in placing the drive upside-down. Sometimes, I'll quickly spin my wrist when I turn the power on. The upside-down mostly worked on the ST1120A/ST3120A drives (Seagate 120M). I have no definitive answer as to why. The ST138R had a problem with what I call "STICTION." This is my opinion, Seagate! I theorize that the armature would get stuck between the poles of the magnetic fields. In any case, those days are mostly gone.

This is usually the extent that I go to. After this, the customer must decide if the data on the drive is worth the cost of the recovery. I end by selling the customer a new drive and restoring their data from the image. This is usually on a second visit since I don't make it a habit of stocking drives for sale in my van.

From: Peter Becker

This has worked about 6-8 times over the last 5 years...
I have found the drive is not spinning...
If this is the problem, just remove it and rotate the drive quickly and immediately reverse direction. You may have to repeat 2-3 times. It works for a while...
This appears to be more of a problem with old Laptops.

From: Bill Rankin

1. First some background info is needed:

   A. Does the BIOS recognize/see the HD? (Correct drive settings? Disk Manager in use?)
   B. What is the OS? (Win 95/NT/Linux/etc.?)
   C. What is the partition type? (Fat16/32/NTFS/etc.?)

2. If A. is yes, and C. is not 16/32, try a boot diskette (Win95/98). A command prompt, a couple of utilities, and a working parallel port will get your data off safely.

3. If A. is yes, and C. is NTFS; try a new hard drive as C:, load a new NT/NTFS system, and access the "dead" NTFS drive as the D:. Sometimes the hard drive's onboard controller can fail, yet be chained to another's board à la master/slave mode. Copy the data off ASAP and ditch the old drive to avoid the temptation to keep it as spare storage.

4. If A is no, try another computer-the BIOS/motherboard/CPU/memory/IO controller may be dead or malfunctioning. Troubleshoot the computer later when you have time.

5. If all else fails, attempt a drive recovery with Hard Drive Mechanic, or similar drive utility. If successful, copy the data off ASAP.

6. If the data is EXTREMELY valuable, and if you have a certified clean room/booth (or a professional service), transfer the disk platters into a exact duplicate working drive. This is a very costly option due to the requirements of a certified clean room/booth.

7. Last, but not least, PREACH TAPE BACKUPS!

LEGALESE: These techniques have been used by me to recover failed hard drives. Use of any of these techniques does not in any way bind me, nor any companies associated with me, liable for your attempts, actions, or losses as your circumstances may be dissimilar or conditions not covered by the aforesaid instructions. Be sure to get technical advise from a reliable source familiar with your situation.
From: Jon Torbert

Well, things are a little ambiguous here. Do we know that we are working on the Compaq Prolinea 4/66? Since it didn't specify, I will keep this somewhat general.

- The first step would be to boot off of a DOS startup disk and see if you can access drive C. If you can, then you at least know that you can manually save some crucial files on the machine. If the C drive is not accessible, then you need to go into the CMOS settings and see if the proper drive parameters are entered. If it is a newer machine, you can sometimes find a section in CMOS that will query the hard drive and determine the proper settings.
- If there is no such section, then you need to open up the computer and see if the drive settings, like heads, cylinders, sectors/track, etc, are listed on the drive.
- If none are found, get the drive make and model number and go to the company's Web site and get the parameters. Now go back into CMOS and enter the proper settings for your HD. Hopefully this will solve the problem since it was mentioned that the person had been in trying to input the setting themselves.
- If the drive still won't boot, and you are getting a "non system disk" error, I have found that sometimes you can copy the sys.com program onto your startup disk (I keep a generic boot disk around with various files like fdisk, format.com, sys.com, etc on it.) and at the A: prompt type sys c: which transfers the system files to the HD.
- If you are instead getting Invalid drive specification errors, you probably aren't able to access the HD at all, even at a DOS prompt. If this is the case, you probably need to try reviving the drive with a program like Norton Disk Doctor. You have probably lost partition info or your File Allocation Table (FAT.) These are things that Norton DD can sometimes fix. If one of these things works, it is probably a lost cause. Write it off to experience. Everyone gets this fatal wake up call every once in a while to remind them about backing up crucial data.

From: Ronald E Rietz

1.) Examine all connections inside and outside the PC to ensure they are secure. Remove and label the suspect drive. Make sure all fans are operating correctly. Obtain a replacement hard drive and install the operating system and Web browsing capabilities. Retain the box in which your replacement drive was shipped in case you need to ship your suspect drive away to a media recovery firm. Visit the Web site of the hard drive vendor and download the latest version of the vendor's diagnostic program as well as information regarding drive's geometry and jumper options. Determine the keyboard strokes to get into setup mode as well as setting up disk drives for auto detect, etc. Have an ample supply of blank formatted diskettes readily available. Make sure you have space available to copy any needed files from the suspect drive. Make a boot diskette. FDISK, FORMAT, EDIT, SCANDISK, CD-ROM drivers, and the hard drive vendors diagnostic programs should all be on the diskette.

2.) Install the suspect drive as a slave. Carefully handle the suspect drive as to not bump it around at all. It may be in a _very_ fragile state at this time. Close the PC’s case or otherwise ensure that there is positive air flow across the suspect drive.

3.) Take a break, think about how you will do the following carefully and as fast as possible to avoid possibly damaging the drive further.

4.) Turn on the monitor, insert your diskette from step one. Turn on the PC and go into setup. Determine whether or not the setup program auto-detects the suspect drive. If auto-detect is OK, the disk drive's controller is OK and proceed to the next step. If auto-detect is not OK, the hard drives controller card(s) are faulty. Try substituting a different controller card from another drive of the same type, if available. Assuming the controller is faulty and swapping the external controller card does not fix the trouble, you have a choice of sending the drive off to have the controller card repaired in a clean room or to abandon your data.
access the information (when you try to enter into a directory or call up a file you get an error message) chances are you have a messed up FAT table.

- You can try to fdisk /mbr from your boot disk, it will re-write the FAT table.
- Now pull out the boot up disk and try to reboot again. Any luck? If so you may be in business, if not you’re hosed.

I've tried, with mixed success, using Powerquest's Lost and Found program to try to retrieve data from a hard drive. It's hit and miss enough that it will depend on budget and how "important" the information is before I try to recover it. We just had a hard drive crash that we sent out to have the information retrieved, at $125 an hour it was expensive to recover.

Those are my solutions, for what they are worth.

From: richarr

This has happened here several times.

- I install the new hard drive, make it a bootable partition, and install the operating system.
- Then place the old drive on the secondary disk position and copy the contents to the new drive.
- Usually into a folder called OLD DRIVE. This provides a directory tree map for where to place the files.
- Then after reinstalling all the software, original files can be placed back into the proper place on the new drive.

Very rarely does this procedure not work for me.

From: KC Freels

- Try putting the drive in another machine. It may come up there.
- Put it in as a second drive and boot from a working drive.
- Try and access it there. Failing that, try using a program like Ghost and image the drive onto another drive. If it works, you're very lucky.
- If the motor is stuck, or the drive is just spinning right, open the top of the drive (it's dead anyway) and spin the platters using the spindle.
- Sometimes this will get the drive spinning and usable one last time.
- It will never work again though, so this is a last resort.

From: David Chambers

This is a common situation. And, it has turned out to be a simple resolution (most of the time). I'm the Network Manager at the San Diego Blood Bank. The non-profit status of our organization makes purchasing new, up-to-date equipment quite a challenge. Consequently, the largest percentage of my 220 desktops are legacy 486/66 boxes. Their relative age brings about hard-drive failures on a monthly basis.

I've been able to extract the data from these drives using a boot disk, and one of two backup methods.

1. Use a portable backup tape drive that runs from the parallel port (Trakker).

2. Use DOS Client and a boot floppy to get the box on the LAN then map a drive with NET USE and XCOPY the important files to the LAN.

Of course, the boot floppy method works for about 75 percent of the failures. If the boot floppy fails, I try using FDISK/mbr to rebuild the Master Boot Record. This is successful 5-10 percent of the time. Since the user mentioned in the quiz had messed around with the BIOS, it's possible the settings
1) Use the CMOS IDE auto detection. Try to use both LBA mode and normal mode. Reboot and see what (if any) failure comes up.

2) Boot from a floppy (this is critical that the user knows what version of OS he/she is running: 95, 95b, 98, 98b, etc.). Use FDISK after this to see if the drive is present. If so, SYS the drive and reboot (crossing eyes, fingers, and toes).

3) Tear into the computer and make sure the cabling is correct. For good measure, reseat the HDD cable (both ends) and power cable. Turn system on briefly to ensure the HDD is spinning up.

4) Try using the secondary controller on the motherboard (being sure to make the CMOS change as well).

5) Try a different IDE cable.

6) If none of the above steps work, it must be 4th down and time to "punt." If the data is irreplaceable and critical, call Onsite for a quote on data recovery.

If drive is SCSI:

1) Use the controller utilities to see if the card settings are correct.

Unfortunately I am not experienced in SCSI drives and would not be able to apply anything more than what is listed.

From: Gary Gillaspie

Depending on the operating system, I would use a boot disk with FDISK on it. Boot the PC, and run FDISK /MBR, which would fix the boot sector so you would be able to look at the hard drive after a reboot. A 2nd option is to use the hard drive manufacturer's disk utilities from a floppy that MAY BE able to repair without losing data.

From: KASHIF SALIM BAWANY

Solutions:
(1) Boot computer from a bootable disk, load CD-ROM drivers. Then run ndd's (Norton Disk Doctor) revive option, this will revive the mbr (master boot record) and all the data.
(2) Make the faulty drive slave drive on a system running Win95/98. Try to backup data as much as possible, then shutdown the system and then make the faulty drive as primary drive and boot from a floppy drive and run fdisk.
(3) If it doesn’t work, then boot the system with faulty drive as primary drive with a dos/windows bootable disk, then run hard disk manager (e.g. Seagate's DM).

From: Jack Levin

The first thing I do is see if the drive is spinning. Many times the drive just gets stuck and a small tap will get the drive spinning again. If that is the case and the drive does come back after some mechanical agitation, I "Ghost" the drive to a new replacement as fast as I can.

If the drive is spinning but still not accessible, I have had luck making it a slave drive with a known working master. Sometimes that helps. Once I get access, I copy as fast as I can because I know every minute is borrowed time.

When the FAT has become corrupt, I have tried third party recovery tools with little success. If the FAT backup is no good, I am at a loss (short of sending it out to a data recovery service).

From: Howard Adkins
I have used their tools in the past to recover data from disks. Some disks are just impossible because the electronics on the drive have failed. In this case, the only hope would be to swap the circuit card on the drive with a known good one.

From: Brad Gorecki

To remedy this situation, I would verify that the drive will still spin. If that is the case, I would use a product called Recover 98. As long as the drive is spinning, I can get the data off. After verifying BIOS settings and making sure the PC will at least detect the drive, slave the new drive off the bad one. Run this software package and transfer the data to the drive. This software works on deleted files as well as formatted drives. I believe this would be the easiest solution.

From: Bob Matott

One additional thought for the rare problem-swap the circuit board from a known working identical drive onto the bad one. Sometimes the electronics do take a "hit."

From: Craig Connelly

1. Check the old CMOS on board battery. Replace if necessary.
2. Get the drive specs and go to the manufacturer’s site and get the info on the drive.
3. Try to use a boot disk from a well-known Utility software package.
4. Use a Data Recovery program if the drive will spin up. Get the data off the drive.
5. Fdisk/MBR the drive and see if it will then accept a new OS. Still.
6. Don't waste too much time on the issue. Data is only as good as your last backup. Figure out how the cost benefit of trying to bring the drive back to life and just getting a new drive. "Save early, Save often."

From: Pahl Jeff TSgt AFMIA/MISO

For FAT file systems.
1st boot from floppy and try to access C:.
If that doesn't work, run Fdisk /MBR. Sometimes replacing the master boot record will fix a non-booting drive.

From: Matthew Harvey

Had this happen last year. Tried running the drive as a slave in another machine (could be the controller, you know) but that didn’t do the trick. So we sent it away to a recovery shop. They charge $100 to look at it, send you a list of all the files they could find and recover, and then they want $1,500 to send you those files on a CD-R. We balked at the charge and said, "No thanks, just send us back our hard drive." They did. Of course, in order to read the disk and list the files for us, they had to make a repair to the drive. When it was returned to us I was able to slave it in another machine and copy all of its contents-just finished before their jury-rigged repair failed on us. Full data recovery for $100-not a bad deal, huh?

From: Spike

There are many different ways to approach this. It should depend on the O/S involved.
• In a Win95 situation, the first thing is to check the BIOS configuration and make sure that the user didn’t inadvertently turn off the HDD.
• If this checks out okay, open the PC and check to make sure the cable is secure...or replace it to rule this out.
• If still no go, boot from a floppy (DOS or Win95 Startup Disk will do) and sys the drive using the
sys c:\ command.
• Often this will work with Win95.
• If the drive boots (even just to a prompt) run a virus scan. Many viruses hide themselves in the
boot record and will actually copy the boot record to a different part of the drive...thus, not
allowing the O/S to find it. If no viruses are found...run a scandisk (from the floppy or from Safe
Mode) and make sure there isn't too much corruption.
• Corruption or not...it's time to back up your important files and format the drive. This may be all
that's needed to restore a drive to a functional state.
• If after the format there are still problems...trash the drive. Don't take any chances with a flaky
hard drive.
• If the suspect drive is a Winnt drive...there are not a whole lot of options. Follow the steps above
to the point of rebooting the system.
• In the case of NT (if it is not BIOS related), you will generally get a ntoskrnl error and the
system will halt. Otherwise...the BSOD is always a possibility.
• To lessen the chances of losing all of your data, boot with a clean diskette (Dos or Win95) and
run a setup from the NT floppies.
• Choose the option to repair the existing install, selecting all of the options of what to repair.
• If this works, the worst thing that will happen is you will have to reinstall your applications to re-
register them in the system registry (which will be replaced).
• In the event that the drive will not boot at all, take the drive to another machine and slave it to an
existing hard drive (preferably with NT as you won't see the NTFS partitions otherwise).
• Boot the second machine and see if the drive is visible from explorer...if the lucky you!
• Back it up pronto.
• If you cannot see the drive because it has an NTFS partition and the machine you're using is
Win95...there is a utility available called NTFSDos.
• Get this...it's an invaluable resource for NT techs. It allows you to boot from a DOS floppy and
see the NTFS partitions from the command prompt. You can then copy or backup necessary
files prior to a reformat.
• If the drive is still dead in the water after all of this...chances are it's going to stay that way but I
haven't come across too many drives I couldn't re-animate. :-)

From: Jamey Copeland

Make sure the drive's data ribbon cable is connected securely at both the drive and the controller. If
the cable is damaged, try a new one. Enter the CMOS setup and make sure that all the parameters
entered for the drive are correct.
Boot from a floppy disk and try accessing the hard drive. If that is possible, then it is probably
because boot files are missing or corrupt. If that is the case, use a third party software fix kit.

Try Sysing the c drive if it is visible from dos.

Check the power connector.

Replace the hard drive...hehe.

From: George Rosser

• The first thing I would try would be to make a boot disk from another machine and boot up the
machine and see if it can read the drive.

• If that didn't work, check the settings for the drive and the size of the drive if the user has been
playing around with the system. It is possible they changed the LDA or other settings.
Or call a professional Hard Drive Recovery Service!!!

From: Dan Calloway

I would take the following approach when trying to revive a hard drive that doesn't boot up and where there is no startup disk that had previously been made: There are really three different tasks involved here. (1) To get your data off the hard disk; (2) you must make the disk hardware respond to the system; and (3) you may want to make the disk bootable again and perhaps keep it in service. Here are the steps involved:

(1) Boot from the floppy drive with whatever drivers and system files your system uses, then try to read drive C. The first and most important piece of data on the hard disk is the MBR and the partition table. There are a number of programs that will read an MBR. One such program is a DOS program called Fdisk. Norton Utilities is another.

(2) If you can read drive C, backup the contents of the disk and then either reformat the disk and reload the data. If you can't read see drive C, then start Fdisk or some other MBR reader to see if the system acknowledges the existence of the hard drive.

(3) If the drive isn't recognized, then check for loose connections and check the drive's configuration in CMOS. Is the drive too hot or cold? Is it spinning at all? Remove and reseat the controller. A controller swap might possibly make the drive respond where it wouldn't before.

(4) If drive C is recognized, then examine the partition table located in the MBR with Fdisk or Norton Utilities, to see if the partitions are well-defined (this should be for a drive that worked previously).

(5) If the partitions don't exist in the MBR, then the response is to rebuild or restore the data to the disk. You may have to rebuild the MBR from a previously backed up copy of it or, if you haven't backed up the MBR, steal an identical MBR from another PC by backing up the MBR from a working machine onto a floppy disk and restore the MBR of the troubled PC.

(6) Reformat the first track of the disk with an autoconfigure controller. If you can low-level format the disk, then use HDTEST or some other selective low-level formatter to reformat the first track. If this doesn't work, then there is probably a physical problem with the drive at cylinder 0 head 0. Take another hard drive with identical characteristics and partition layout and boot from it. Then park the good drive, disconnect the power leads from it before disconnecting the data cables, connect the bad drive up to the system via power and data cables and unpark it.

(7) Next finish up by examining the DBR or DOS boot record. This is the first sector in the DOS partition. It contains a small program that loads the hidden files and boots the operating system. You can repair the DBR by further examining the data structure inside the DBR called the BIOS Parameter Block or DPB. It describes the disk, how many FATs are on the disk, how large the clusters are, what the total number of sectors on the disk are, and so on. You can reconstruct the DPB from a program called DISKLOOK or Norton Disk Doctor. You can write the good data from a working disk to the non-working disk using these utilities to revive the drive.

(8) Once the data has been extracted from the drive, throw the bad hard drive away.

From: Frank Luna

Upon reading the error, this appears not to be an issue with the drive but the controller or the logic in the auto drive setup. If so, this should work.
### From: ICAN WORKS

**THESE TRICKS HAVE WORKED FOR ME SEVERAL TIMES WHEN CMOS LOST THE C DRIVE OR COULD NOT READ IT**

**INVALID DRIVE SPECIFICATION**

1. **POWER OFF.**
2. **DISCONNECT C DRIVE.**
3. **POWER ON. DISABLE OR REMOVE ALL FIXED HARD DRIVES IN CMOS.**
   - **RUN AUTO DETECT, (NONE DETECTED) GOOD!**
4. **SHUT DOWN, RECONNECT HARD DRIVE, REBOOT.**
   - **IF C DRIVE TEST ON BOOT MENU DOES NOT APPEAR ENTER SETUP, RUN AUTO DETECT, THIS TRICK USUALLY WORKS ON THE 386 & 486 MODELS.**

**UTILITIES ON FLOPPY**

THIS TRICK WAS AN ACCIDENT AFTER A LONG DAY, BUT IT WORKED (NOTE THIS METHOD WAS ONLY EVER USED AND TESTED ON 486S) IN FRUSTRATION OF TRYING TO FIND THAT DARN HARD DRIVE, I DUG OUT A BRAND NEW DATA CABLE, INSTALLED THE CABLE AND REBOOTED.

C DRIVE ERRORS ALL OVER THE BOOT SCREEN. WHEN I INVESTIGATED MY HANDIWORK I HAD DISCOVERED MY ERROR AS I HAD REVERSED DATA CABLE AT THE IDE SLOT. I QUICKLY CORRECTED THE MISTAKE AND REBOOTED, THINKING "NOW I REALLY DID IT????" THE SYSTEM REBOOTED FINE, RAN SCAN DISK, ALL SYSTEMS OKAY. OS BOOTTED UP GREAT.

JUST AN HOUR OR SO AGO, A TECH GURU TOLD ME OF HIS SIMPLE METHOD. I HAVE NOT TESTED THIS ONE YET. HE SAYS REMOVE DATA CABLE FROM HARD DRIVE, RUN FINE SCREWDRIVER OVER CONTACTS OF HARD DRIVE TO SHORT OUT OR, AS HE SAYS, DISCHARGE THE COMPONENT, RECONNECT, REBOOT, AND IT SHOULD WORK. WELL IF IT DOESN'T, IT WAS GOING INTO THE GARBAGE ANYWAY.

### From: Doug Carpenter

1. Check the CMOS battery, your problem may be simple. It could also be an intermittent short on the system board or a failing battery. It holds the system info until you shut down, maybe for as long as five minutes, then fails. What's the clock say?
2. Make sure a disk manager isn't installed on the drive. If that's at least a possibility (greater than 2.1GB on old 486 computer?), try using the usual drive parameters for a disk manager: 1024, 16, 63
3. Maybe the master boot record was lost. Try fdisk/mbr. Make sure you're using the correct operating system version.
4. Boot from a clean floppy and try to change to C: If you can see the drive, you may have a virus.
5. Can you hear the drive spinning up? Can you see a hard drive access LED visibly working? Maybe it's spinning up slowly, press pause or reset to allow time for the hard drive to get up to speed, see if the problem disappears.
6. Check for a bad cable connection or power connection. They should be seated firmly. Are they oriented correctly? Maybe someone else worked on the machine. Is the ribbon cable made for cable select? Is it set that way? Check the jumpers.
7. If all else fails, put another drive in and see if it works okay.
hammer.

When I arrive on-site, I would first reset the CMOS settings to factory default. There can sometimes be corruption of the CMOS and can cause drives to seem to have “failed”. Then I would go over the CMOS settings and make the appropriate changes for that particular system, including setting the primary HD to AUTO. If this fails, then I would boot to floppy and determine if FDISK can see the drive. If not, then it’s time to open the case. With the PC turned off, I would first check the drive cables to verify a solid connection to both power and data cables, and install my spare drive (to save data with). With the case still open, I would power-on the machine and listen carefully for the drive to spin up. If I cannot hear the drive spinning up, then I would remove the drive (with power off of course). Then with the drive in my hand and still connected, I would power up the PC again, feeling for the centrifugal force the drive would create from the spinning platters. If there is no torsion effect felt, then this would mean that the platters are not spinning and that the heads may be “stuck.”

This is where the hammer comes in. Power up the PC again and LIGHTLY tap the drive case edge once or twice with the hammer handle. This will usually unstick the heads from the platter and allow me to copy the data (or whole drive depending on the situation) to the spare drive for safekeeping until the user can purchase a new drive.

If this also fails, then once again the hammer comes into play...this time to allow the user to beat the crap out of the old drive and relieve the frustration of having lost everything because they thought "backups are for sissies."

From: Carla Maslakowski
Boot PC into setup and restore drive settings. CMOS battery must be dead which is why setup lost settings. Replace CMOS battery in this PC and drive should keep settings.

From: Todd Layland
Pull the jumper on the motherboard that will reset the settings (biOS, password, etc.) of the system. If it boots, you know it was a config setting that screwed up. If it doesn't, well HD are cheap.

From: Dale
First things...first:
- I would flush CMOS and then look at the drive and write down the correct drive settings for Cylinder, Heads, and Sector.
- I would manually enter this data if auto detect could not figure it out.
- If unable to boot after manually setting up the drive, I would check settings in CMOS and then boot from a floppy (THAT I WOULD HAVE BROUGHT WITH ME!) that contained sys.com, fdisk.exe.
- After a successful boot to a floppy, I would do an FDISK/MBR and then reboot the system and let it fallback to a backup MBR.
- If that failed, I would boot to a floppy and do a sys c: then reboot.
- If unable to access the drive after the mentioned steps, I would boot from floppy, change to C: and attempt to recover as much as possible to floppies.

From: Ken Beckett
I would take the drive out of the PC it is in and take it to another PC put on the secondary IDE. I would look up the drive parameters and enter those parameters in the bios. Start the PC and hope to get the drive to run as a secondary drive.
to spin up and need much more attention.

- In these cases, method is critical. Set up the machine with a second hard drive.
- Boot to dos and try to copy the data off the drive using XCOPY. This way if you do run into bad sectors or a crashed head you can simply stop the copy by hitting [Ctrl]C.
- I have even been able to get some drives to spin up by "gently" tapping on them with a screwdriver while they were powered up.
- Please keep in mind that this is a last resort technique.
- I have even frozen a few drives to less than 40 degrees below zero. This will sometimes allow them to spin for long enough to get some data from the drive.

From: Avraham Schkloven

Firstly, I check all my cables (data, electric). Is the disk spinning does it make those little noses at startup? If NOT, I try a little tap with the back of a screwdriver. If it comes to life and boots, I make backups and replace the disk. If not, well all disks die—it’s just a matter of when.

If the disk is spinning at startup:

Be aware that many older viruses effect the boot sector and fats of hard drives and give errors "invalid drive specification." a good DOS antivirus should be used.

Then I try to reset the setup to the proper numbers and boot from a floppy disk with the proper operating system. On this disk is FDISK. I personally use a program call RESQDISK from Invircible Anti Virus. It has saved my skin many times in rebuilding the boot sector and fats (one could try the FDISK /MBR command).

Norton DISK EDITOR for DOS fits on a floppy and once you boot from a floppy you use it to dump the content of the C drive off to another drive.

If available I use a new hard drive. Making the bad drive the slave and the new drive master and try dumping the disk. This works only if access has been restored.

Unfortunately, some patients do not survive.

From: KrisMHorn

At times, the hard drive has lost its Master Boot Record (MBR). Sometimes it will work to type fdisk/mbr at the dos prompt (usually from a system bootable floppy).

Other times, you may want to use the old handy command, SYS a: c: (Re-creating the system files on the C drive).

Usually, if these don't work, your drive can be sent to a data recovery center (if the data is just so critical that they can't live without it.) Usually, this costs hundreds of dollars.... And you would still have to replace the hard drive in order to obtain the data back from the recovery center.

From: Denford L. Owens

I use DrivePro by ForeFront Direct. It analyzes problem areas, can find and repair MBRs as well as repair them.

From: David Crocker

- I always start by booting from a floppy and seeing if I can access data on the failed hard drive.

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BIOS can't detect the hard drive), power supply problems, and bad power cables.

It's important to work logically and try to eliminate the easy stuff before you have to replace a hard drive.

From: Steve Schoenecker

After questioning the user to eliminate the upgrade/jumper issues or other changes such as playing with encryption/privacy utilities, etc.

- I'd boot from a clean floppy (watch closely for indication of an overlay program which might say "to boot from a floppy, hold the spacebar down." This can really eat your lunch!) and then run a dos-based virus scanner such as FPROT or something like that just to be sure.
- If the drive is not detected or can't be accessed at all:
  - Look inside and see if the drive configuration specs are on the drive or look them up... make sure power is connected securely data cable etc. Make sure drive is spinning up, verify cmos settings for HD type, and boot order, etc. Visually verify which devices are on which IDE channel etc.
  - If I fix the cmos settings, then the system boots okay but not after being turned off...suspect cmos battery...drive is probably okay-good idea to backup important stuff at this point anyway!
  - If I cant get to c: drive, I'd probably run fdisk and look at the drive information to see if I thinks that the drive has partitions defined, how many, what size etc. I've seen the fdisk table scrambled mess because of a virus... I have fixed this problem a couple of times... OS2 fdisk utility can help here sometimes... (more of a last resort) but anyway important data (if I get it running) and then start over with fdisk/format/reinstall....
- I think I would isolate it on the bus and set the cmos and jumper settings accordingly just in case the other device is disrupting the thing.
- At some point I would probably replace the drive with a drive known to work normally, and run it to eliminate other system, problems cable problems, etc.
- If another drive works but not this one, and I still cant access the drive at all...punt.
- If critical, consider sending to a data recovery specialist.

If drive is detected but won't boot:

- Start the system and watch to see how far it gets. If possible boot to c:\ prompt.. if not, boot from floppy.
- If I can access the stuff on the drive, I'd back up. If drive is accessible but won't boot, I'd check the version of OS then sys the c: drive with an appropriate boot disk. If this doesn't work, maybe fdisk /mbr will help.
- If the OS dies while loading drivers etc.. look there...

Hope I haven't forgotten anything obvious... each one is different and I usually win! I have a couple of dead drives in a box... I'd love to hear some new tricks to try on them!

From: MICHAEL W. BROWN

Order a new identical drive and swap the controllers.

From: hotmail

Unfortunate the box does matter!
1) Open the box and check for HD's model; go to manufacturer's Web page; find out the details (Heads, Cylinders, sectors per track) and use those at setup, configuring manually the HD's params; download specific software (EZdrive, etc.) for the HD's model.
2) Check for OS the user is running.