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Open an Xbox

Step 1 - Start with the necessary tools and a clear work area.

Helpful tools:
Insulated screw grabber (comes with many PC repair kits)
X-Acto Knife useful for removing stickers and feet.
Wax paper, good for keeping those stickers in shape.
Required tools:
Torx 20
Torx 10

Step 2 - peel back the stickers. If you're not too worried about looks a Torx #20 punches right through the stickers with ease. If you want to keep it looking tidy cut a piece of wax paper to size to help preserve the stickers.

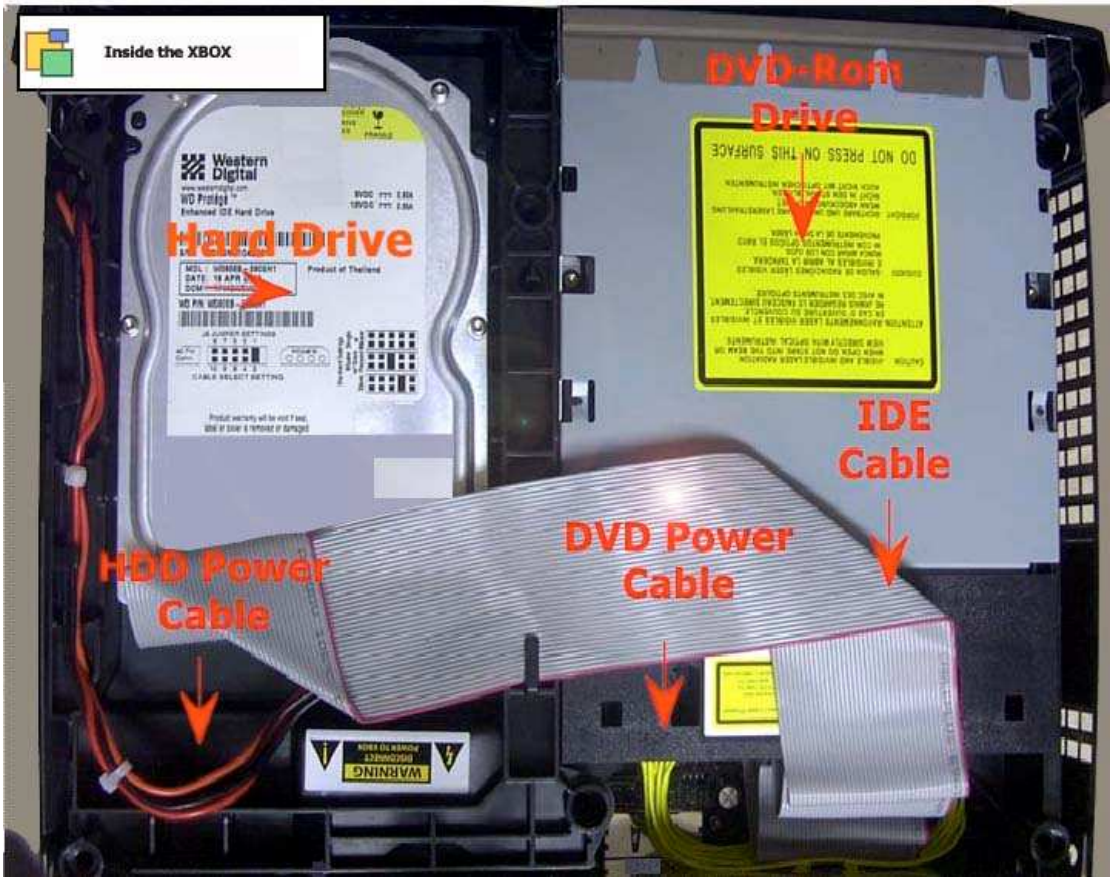
Step 3 - The other case screws, a total of 6.

Getting at the screws under the feet. Just peel back the outer edge of the rubber foot. Leave the other half of the adhesive rubber foot to hold it in place. This is a good time to get out the X-Acto knife to help peel back the adhesive. (Update, I find I just cut the feet when I try to use the X-acto knife, try wedging the #20 Torx in there and twist it using the "fins" on the driver to pull up the pad just enough to get to the screw) Once you are able to get the feet up just enough to get at the screw start un screwing, let the screw push the foot out of the way rather than trying to peel it back further this way the pad is only removed as much is absolutely necessary.

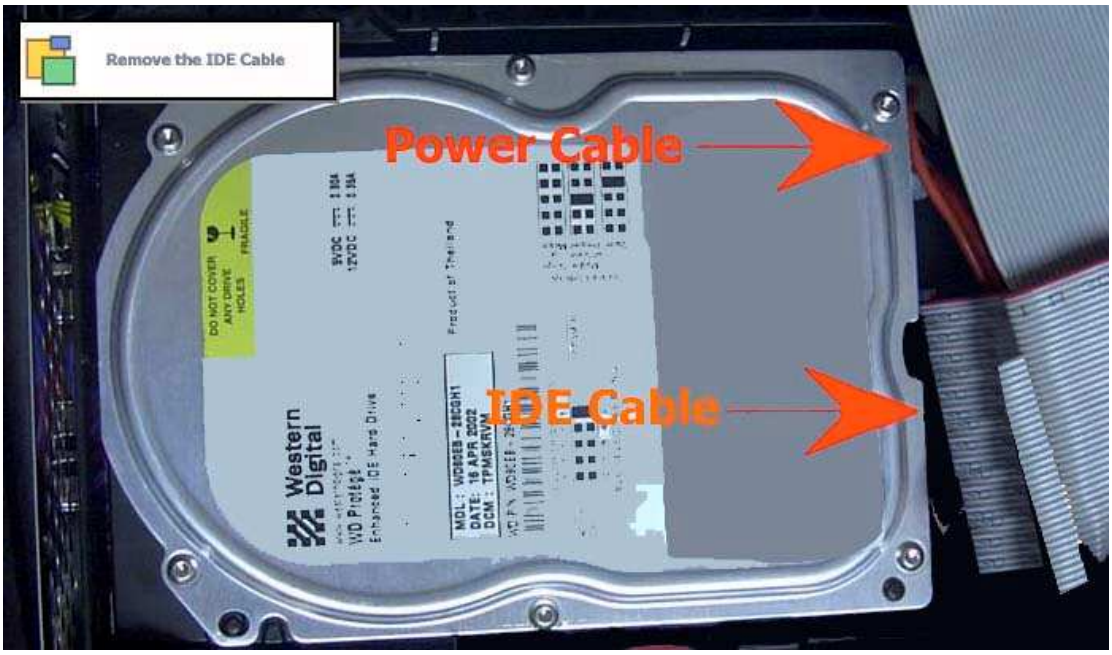
Once all six screws are removed, flip the box upright and grab the sides and shake it a little bit and the bottom should drop away from the cover. I find this is done most easily by putting the Xbox in my lap.

Step 4 - Drive removal, there are 3 screws total holding in both drives. First remove the one for the hard drive; it is located under the IDE cable.

Two others are on either side of the front of the DVD drive. Once the screws are removed unplug the IDE cable to the Hard Drive and loosen the power cord from the track it sits in on the drive tray if you miss this step you wont be able to remove the drive. The power cord can be left plugged in on the hard drive, the cord is long enough to allow you to position as desired. The hard drive needs to be lifted straight up for removal and there is no really good way



to grab it, I find sticking a finger in the hole in the front right of the carrier and grasping the rear of the carrier with the other hand works to get it loose, moved up about an inch or so and then lifting it with both hands from the sides to remove it.



Step 5 - With the Hard drive out of the way we get a good shot of the mounting screws for the power supply and DVD drive. Get those two screws at the front of the DVD drive after removing the IDE cable and Yellow cord from the motherboard. You may have a little difficulty removing the DVD drive, it does not slip out easily but as long as you have the two screws in the front and the two cables in the rear removed it can come out, again the trick is to go straight up.

Now with the drives gone it is starting to look like a normal PC.

Removing the power cord from the motherboard. Most sites tell you to use pliers to remove the power plug; it is in there pretty good. I personally pull on the wires themselves, I risk yanking a wire out of the crimp in the socket, and if I screw one up I am willing to repair it. Use your best judgment, the key is to grab half of the wires and pull evenly on all of them at a 45 degree angle, to raise one side of the plug first and then the other, it will not come out straight up.

Once the power cord is removed from the motherboard and the two mounting screws are off the power supply, grasp the heat sink on the power supply or use the cord that was going to the motherboard to move it about a quarter inch forward, this releases the power supply from the plastic tabs that hold it down on the side opposite the screws. Now the front of the power supply can be raised to allow the leading edge to clear the front of the case and it can safely be pulled forward and removed.

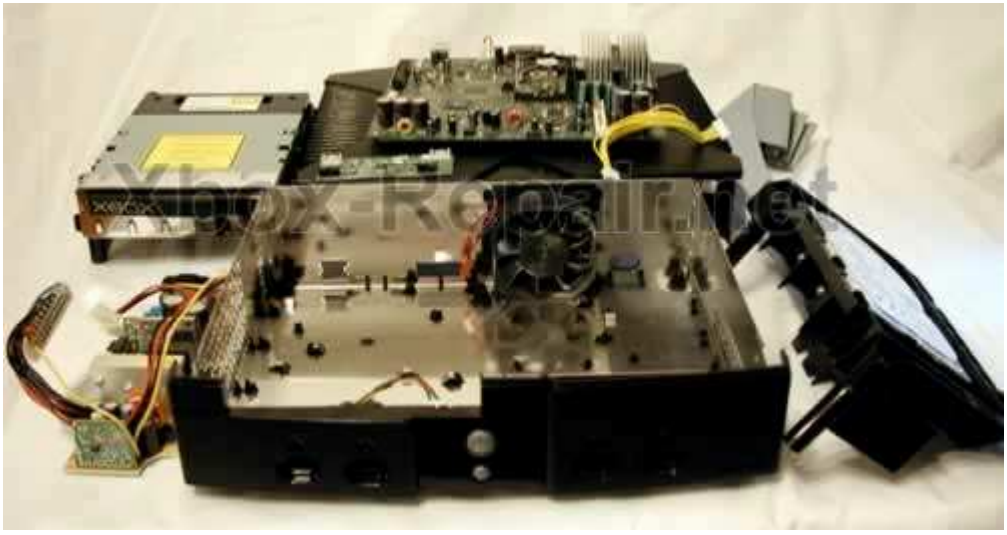
Step 6 - Eleven screws on the motherboard

Remove them all and be careful not to scratch the surface of the board with the driver.

Step 7 - Board removal
You will need to disconnect the yellow wires coming from the fan, power and reset switches and also the connections to the USB game controller ports, the USB daughter board itself can be left in place or removed. To remove the

motherboard lift the front to a 25-degree angle as shown in the picture it can then be pulled forward and removed.

You should now have a pile of parts like this



To get to the power and reset buttons you will need to remove the front faceplate. I have only done this by completely disassembling the case including the fan and inner tray. By doing this bottom of the case becomes flexible and you will have an easier time popping off the front. You will find three tabs inside the case that are holding it, careful these are fragile. To get the plate off you will need to loosen the three and both sides of the front plate where it clips to the sides of the case (the side clips are the most difficult), all three inside tabs need to be loosened simultaneously while popping off one side or the other of the front plate. I think there is a possibility of doing this

without removing everything but for now complete disassembly is my best advice. (Update, check out Removing Front Face Plate for directions)

Open a Controller

This should not even require a tutorial. By far the easiest fix. Quit being annoyed and spend the 30 minutes it takes to clean them up. Nothing sucks more than dieing because of a missed shot, jump, weapon switch, whatever that you have to blame on the controller. So for those of you that need a little encouragement here we go.

Start with a controller with sticky buttons.

Get the necessary tools, a Philips #1

Find the screw holes

Unscrew and remove them, flip the controller back so the screw holes are down. Lift off the top cover.

The buttons will be falling all over the place, don't worry about that it goes together easy.

You can now safely remove all the buttons and rubber cups they sit in.

I gave all the buttons and D-pad a nice bath in warm soapy water. If the board has become drenched with your favourite soda or whatever use some mild soapy water on a rag to clean it up, stay away from window cleaner and other harsh cleaners. Yes, you can put soapy water onto a board and it does not burst into flames or anything, just don't soak it and try to stay away from

components as much as possible. The most important thing is to let it dry COMPLETELY before attempting to use it.

It turns out the drain in my sink has a little bar that goes across that is just small enough to prevent an Xbox button from going down the drain than further than a forceps can reach... Nice design.

Speaking of nice design, look the controller while we have it all apart. Somebody was thinking, the rubber pads act as a little cup to contain any drips of liquid, the controller sticks act like little umbrellas to keep the important pieces underneath clean and each of the buttons are keyed so they can only go back into the controller the right way.

Once the buttons are all nice clean and dry, get the top cover out and start putting the buttons back in place.

Now put the rubber cups in place, these are keyed as well and only fit properly one way.

All right, now we are ready to take the bottom and lower it on top of the buttons and top cover.

Put the screws back where they were and we are done!

Don't soak the top cover in water as I did, the little emblem gets a little misty, it cleared up in a couple days so no big deal. I had to go after the button sockets with a rag to get them cleaned out properly so the soaking didn't do it for that component anyway.

Cleaning your Xbox DVD drive

If you are getting constant dirty disk errors, what do you have to loose, give this a try. The majority of the drives are not really dirty cleaning it will not fix the problem; they are getting out of adjustment or just getting weak. Try not to get your hopes up; too much sometimes you will be improving a DVD from constant errors to less frequent glitching and pausing during movies and games. But I guess that is better than nothing.

See disassembly procedure here for details on how to get at your Xbox DVD drive.

Necessary tools:
Torx #10
Philips #1
Q-Tips
Lens Cleaner
Compressed air

Helpful tools:
Magnetized Philips #1 or screw grabber

Words of advice before we begin leave the small ribbon cables that connect components within the drive alone. If you feel you must disconnect and reconnect a few while you are in there, note that there is a brown wedge in each of the sockets that needs to be pulled out to allow the ribbon to be released.

There are four screws that need to be removed. Two in the rear

and two in the top, mid drive.

Remove all four screws, the ones mid drive are a little hard to get out, screw grabber makes it easy, shaking the drive upside down works too.

Remove the bottom tray first, flip the drive so the bottom is facing up. You need to pull the metal tab in the back over the IDE connector and then it will then slip off. Pull out then up.

Now remove the top, you have to push in two catches near the front on either side of the drive to allow you to tip up the front of the top panel like this.

Now you have access to both the lens.

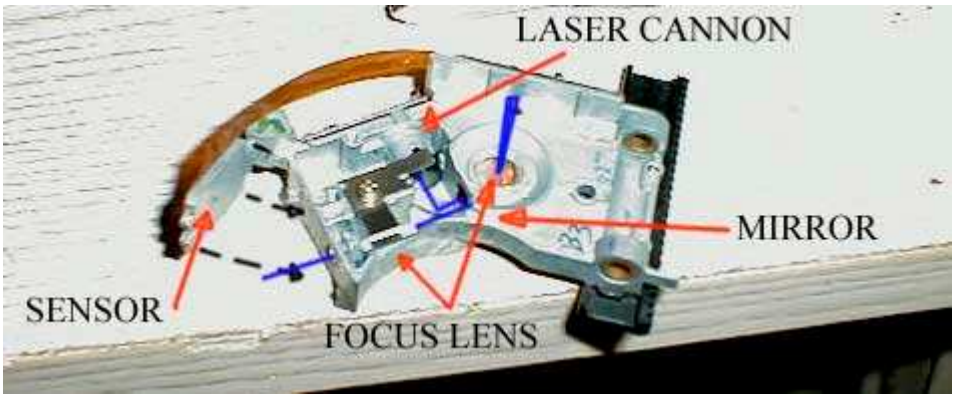
and the mirror

Blast the optics with canned air, then continue on to the blast the rest of the DVD chassis trying to blow the remainder of the dust away from the optics. Using a Q-tip, clean the mirror and the lens with a high quality lens cleaner. I like to use anti static lens cleaner but any glass cleaner should work, I have even heard of plain alcohol being used. The goal is to leave a streak free finish and use one end of the wetted q-tip to clean and the other to dry. BE CAREFUL NOT TO SCRATCH THE MIRROR

One DVD in my collection had a single fibber from cloth on the outside of the mirror, this seemed to be the major cause of the problem but the drive still suffers from occasional errors.

> UPDATED 8/28/03 Thanks CPU64!
> "Here's a picture I just made showing all the parts involved in directing the
> laser to the disc and back. Here you'll see that just cleaning the top lens
> and the bottom mirror isn't really enough.
>
> This is the lens piece without the top lens section. In total, there are 11
> sections in that little piece that need to be cleaned to bring the drive back
> to full potential.
>
> Also notice in the picture the SENSOR is detached from the main body. The
> little opening in between the sensor and the last focus lens

(bottom left) is the
most important place to be cleaned and can easily be done with compressed
air."



Re-assembly is the reverse of assembly, start with the top and then attach the bottom. If you do not have a handy screw grabber or magnetized screwdriver, have fun getting the top two back in place.

You will probably need to pinch the top and bottom together and shift them back and fourth to get the screw holes to line up perfectly. Finish off with the

rear screws, re-assemble the Xbox and hope you made things better rather than worse.

Xbox DVD repair

Since this is one of the most commonly asked questions in my mailbox that is already overflowing lets see if I can make things a bit more clear.

If your Xbox is freezing during games or returning the dreaded Dirty Disc Error you have a DVD drive problem.

You may notice that some of your games play fine while others do not. This is usually because some games are on DVD media and some are on CD media. CD's are single layer media while DVD's are multi layer media. This means it is easier to read a CD than it is to read a DVD. The concept of a DVD is to have several semi transparent layers of data. It is sort of like taking a few CD's stacking them together and smooshing them into a single disc. To read the 2-4 layers of data you must ignore the previous layers and pay attention to ones deeper in the disc. Obviously this is a more complex task and more subject to read errors. My description is not entirely accurate to keep the concepts easy to understand (if anyone would like to reference a technical explanation send me a link)

For instance the double disk of Jet Set Radio Future and Sega GT 2003 is a CD while Munch's Oddysee/Halo is on a DVD. Most often you will notice the bottom of the media is one of two colours, gold DVD's and Silver CD's. It is not 100% that gold=DVD and silver=CD so if you find this rule of thumb to not be true in every case... that's life.

Steps to take in order to resolve Dirty Disk Errors-

1. Use a standard CD/DVD Cleaner, they look like a normal CD but with two miniature brushes on them. This will only clean the lens. Sometimes this is all you need to be up and running.

*****DO NOT BLOW CANNED AIR INTO THE DRIVE WITHOUT OPENING IT******
This will almost certainly make things worse, you just assure that the dust will be redistributed evenly inside the drive and this includes a coating on the optics you are trying to clean.

2. Clean the lens and mirror manually Tutorial

3. Adjust the Potentiometer (pot) on the laser. Tutorial (last resort)

4. If none of the above three revive your drive you can rest assured you have tried it all... Get a new drive, they do go dead and its probably not your fault or the fault of your younger sibling-relative-friend that was messing with your xbox without your permission (yes I hear that a lot). Replacement Xbox DVD Drives

If you know you have a DVD problem because the drive will not open or close, stay opened or closed or makes grinding and popping noises...

The number one quick fix for the DVD drive is to re-align the tray. This is common with CD players, CD changers as well. Many times just from normal use a gear will skip or something will jump track, unless all the pieces are in the right place at the time it powers up it will not work. So by removing the tray, aligning the internal parts to their starting position and re-inserting the tray you can often bring a drive back from the dead Thompson DVD Drive Tray Alignment Procedure

USB Port Installation

Adding standard USB ports for use with Linux

Xbox peripherals are connected using standard USB, albeit with non-standard connectors. There are a number of articles about splicing Xbox and USB cables but it is also possible to replace the connector in the Xbox itself: Opening the case is assumed knowledge as you'll almost certainly need to run unsigned code to take advantage of the USB port, and you won't be running unsigned code without opening it up. Yet.

I used standard USB connectors retrieved from a PC. They're the types that screw into a PCI plate.

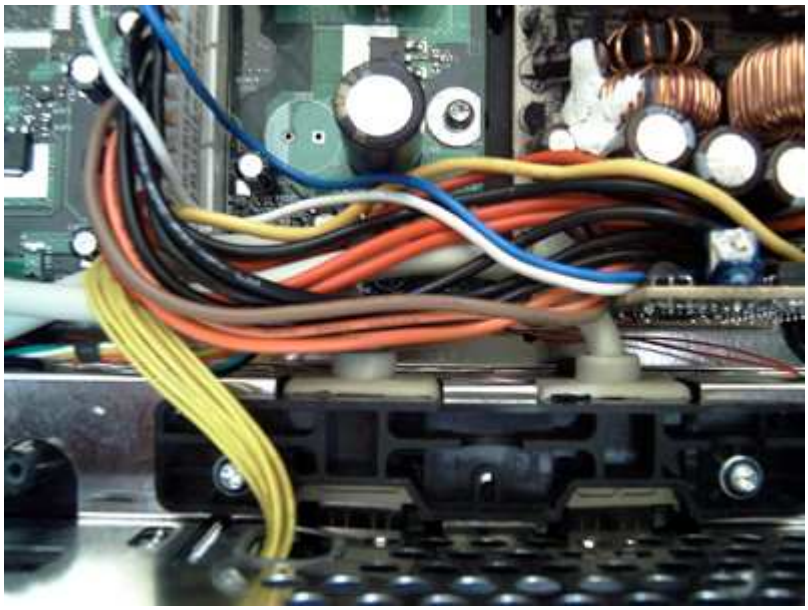
http://www.maplin.co.uk order code LY53H.

When choosing a port, be wary of the effect of missing ports if you intend to continue to use the Xbox for multi-player games. In my case the Xbox will never play an Xbox game so I don't care, and have removed ports 3 and 4. Remove the two screws and cables, and carefully remove the plastic bridge to which the ports are attached using pliers. It's a fairly tight fit. Finally, solder the black, green, white and red cables together, ignoring the yellow which is an extra (non USB) cable used for time critical signalling. Ensure that these joins are well insulated, both from each other and from other metallic parts.

You will need to trim the tabs off the USB connector and maybe enough of the sides for it to fit tightly. I inserted it first at an angle:

Push it down into place, being careful not to slip and damage the motherboard. Mine was a tight enough fit that I didn't need any glue, but depending on the tolerance, type of plastic and

size of connector you may do well to apply some Araldite or equivalent to hold it in place, or modify the removed port block to re-use the black plastic bridge. Be careful when chopping this down to size also, you don't want it to snap in the middle.



Using a PC DVD drive

Remove the power cable from the Xbox drive and attach a power cable splitter (can get from most pc stores) and plug both drives in. Sit your PC drive on top of the Xbox drive. Then remove the IDE cable from the Xbox drive and insert it into the PC drive.

You can't actually replace the drive as the Xbox still needs to access it via the yellow cable. Also if you want to play originals you'll have to plug the Xbox drive back in.

There are then 2 methods to boot - put a disc in the pc drive and reset or if that doesn't work put an original in the xbox drive and your backup in the pc drive.

Hard Drive Upgrades Tutorial

Why replace (or swap) the HDD?

More room for stuff. This procedure is not that hard, actually. Just buy a good, beefy HDD (less than 137 GB, though), follow the outline below.

Western Digital is a good brand, as well as Maxtor. Some say that the 7200-RPM drives are too hot, while others say it doesn't matter. Some even install their own cooling fan just to be safe - we stick with 5400 rpms.

There is a lot involved with this procedure, but it is not too complicated. Again, in accordance with this generalised guide, these steps are just an outline to the procedure.

- Make sure you have BIOS that has what is known as the HDD swap feature. (X2 4976.02 is the latest)
- Make sure you have the latest Evox dashboard installed on your xbox already.
- Backup the original C: and E: drives onto your PC's HDD. This will involve networking to your PC, so make sure you know how to FTP.
- Create an Evox boot disc with evox.ini set up to format the drive. Burn it onto a CD-RW or a DVD-RW or whatever your xbox will accept.
- Open up the console again (you should already know how to do this because you should have already have a working modchip installed).
- Unplug the original HDD and replace it with the new one.
- Put the xbox back together.
- Boot the disc you made. It will start Evox, and there will be a menu option to set up the drive (if you have the correct settings in the evox.ini file). Format it.
- Copy the C: and E: drives from your PC's HDD back to your new HDD.
- Take the disc out, boot the xbox again.
- Keep the original HDD just in case, you can unlock it and bung it in your PC.
- You're done, the extra space is on F:

FTP Master class

What you need:

Modded Xbox - doesn't matter which mod really.
CD burner (and discs that your Xbox can read)
PC with a network card
Network Cable (ideally Crossover)
FTP software
Evox dashboard downloaded (pref latest version)

NOTE ON CABLES - PATCH CABLE OR CROSSOVER CABLE WTF ?

There are 2 types of network cable and both have RJ45 connectors at both ends. (See the socket on the back of your Xbox to understand what a RJ45 looks like)

Patch cable & crossover cable

Patch cable is pin to pin - and is used with Hubs and switches etc.

Crossover cable has some pins crossed (hence the name) and is from attaching 2 PC's (or PC to xbox) directly together.

You can check what you have by looking at the ends of the cable, hold the two ends up and compare them are they identical

- if so its patch cable and you will not be able to plug you PC directly to your Xbox (you will need 2 cabled and a hub)-

if some of the cables are moved its Crossover and you can.

Other than this they look identical. In summary get a crossover cable if you can.

EVOX BOOT DISK

Download and burn the EvoX ISO disk.

Boot your xbox with this disk and check out the settings area - this is were you can set the static ip you want (note ensure you have STATIC IP - set to yes.

And so with a Xbox booted with the Evox Boot disk, connected to your PC with the correct cable you are ready for...

Welcome to the wonderful world of Xbox networking - class 101

To understand Xbox/PC networking you need to think about PC networking a bit even if you know nothing about it - its very logical.

An IP address is exactly what it sounds like -its an address expressed as numbers - it identifies a device on a network and allows you to contact it - there more to it that this but its this concept you need to understand.

There are 2 ways to get an IP address - dynamically (DHCP) or statically,

this first option is called dynamic or DHCP because your IP may be different every time you switch the device on as it gets the IP at that time from a selection of possible ones available on the PC giving them out.

To get an IP you need a device that can assign them - makes sense you say - Xbox cannot assign IP's - it doesn't have the ability as its not got the correct software. PC's can do it but they need to be set-up correctly for this (its easy).

Personally I don't use dynamic IP's on my Xbox as I like to know what IP it has every time and I find it easy to set-up so I suggest you stick to static by setting it on you Evox Dashboard and on your PC to be the same all the time.

WHAT IP ADDRESS TO USE ?

No two devices can have the same IP on the same network - if they did how would you know which was which - they have to be different But they have to be able to "see" each other and to do this you need to have the same subnet - WTF is a subnet ?

Basically - (very basically - please forgive me networking gurus out there) just make sure the first 3 numbers (called octets) are the same but the last number is different.

E.g. these are good example of 2 IP's on the same subnet - I use this at home. I won't go into

why this is a good IP address but you can use anything as long as it's under 255.

IP address
192.168.0.1 PC
192.168.0.2 Xbox

Your Xbox has 3 setting on it on Evox so in this case.

XBOX
Xbox- IP - use 192.168.0.2
Default gateway - us the PC's IP so 192.168.0.1
Subnet - 255.255.255.0 - don't ask just do it.

PC

The PC needs have the IP set on the network setting (in control panel) on the TCP/IP setting.

PC - IP 192.168.0.1
subnet 255.255.255.0 - same as Xbox (always)

Once this is done the PC and the Xbox are "on the same Network" if you like and should be able to see each other.

You may need to reboot both PC and Xbox

Using a FTP program (flashFXP or CuteFTP etc) connect to the Xbox using its IP (192.168.0.2) and the username xbox and password xbox and there you go. you can see the drives on the Xbox - now you have to figure out what you want to do and not mess your xbox up. Award yourself a MCSE in networking and smoke a fat one.

Linux on your XBOX

An Xbox running Linux is very inexpensive, and useful as a desktop computer, for email and browsing the web from your TV, as a (web) server or as a node in a Linux cluster.

What you need BEFORE you start:

* Copy of Wayno's Linux Auto-Installer (Buy Below)
* A modded xbox (any chip will work, F drive is not required)
* Some basic Linux Knowledge
* USB Adaptors * USB Keyboard and mouse (need this is u want to run X)

Instructions (assuming you have purchased Wayno's Linux Auto-installer)

Plug in your keyboard and mouse using the xbox-usb adapters.

Insert the disc labelled "Linux Install Disc"
You'll see Tux in the top left corner, and Linux will boot up.

The Screen will go blank for a few moments, then X-Windows will load up.

Type in the shell command prompt:

su (then press enter)
Enter password "xbox"
Then type :
XBOXLinuxInstall
and press Enter. These commands must be entered just the way they are written above, as UNIX systems differentiate between lower case and upper case letters.

You should now have a dialogue box on the screen, highlight option one "XboxLinux inside the game save partition" and click next.
This installs Linux on the E: drive.

Click Yes to the next dialogue box.
Leave the swap size at 256mb and click next.
Leave the systemsize as 2000 and click next.

LinuxInstaller will now copy files to your Xbox HDD.
This will take around 15 minutes.

Once this is done you should get another dialogue box asking for the IP address. What you enter here depends on how/if you have your xbox connected to a network.
It will also ask for Subnet mask and gateway.
If you are not connecting to a network/internet then just kick next through these.

Right click the desktop and click exit.
At the Desktop Manager screen, click System and shutdown.

There, Linux is installed, boot up with the disc labelled "Linux Boot Disc" to boot linux.

If you use the Evolution-X dash, you can add Linux to the menu, make a folder in your apps folder called "Linux", copy everything from the boot disc into it, reboot. You should see Linux in the Apps Menu.

- Wayno

Thanks to Ed and the Xbox-Linux Project, keep up the good work.