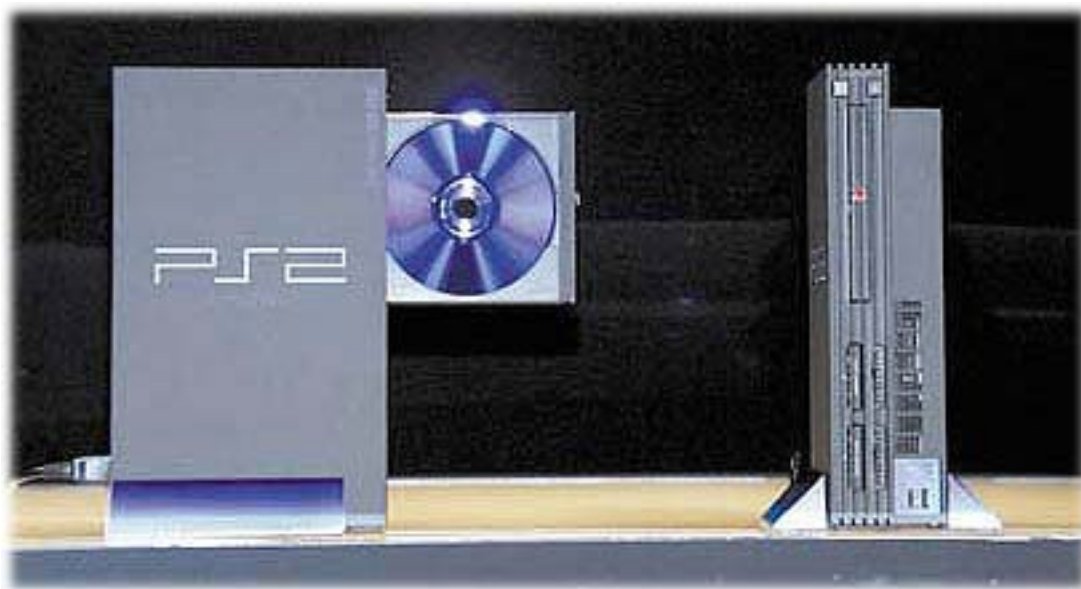


# Playstation 2 Repair Guide

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## **WARNING**

The Playstation 2 is a high-tech piece of equipment. Fixing the console yourself should not be done unless completely necessary. You may risk electrical shock so please make sure your unit is unplugged and take additional steps to ensure your safety. These repairs require you to open your PS2 case which will void your warranty. If your console is still under warranty please think about taking these steps carefully before beginning.



## **DISCLAIMER**

This information is being sold for educational purposes only! I cannot be held responsible for any adverse effects to your PS2 if you decide to use this information. The responsibility is ALL YOURS. I am NOT a Sony Certified PS2 technician. These procedures are a result of my interpretation of what others have reported as well as my own experience with the repairing of PS2 consoles. It is my belief that all of these procedures have been used with positive results for other PS2 owners. Therefore, they should work for you.

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## INTRODUCTION

Hi,

My name is Mark. I have been an electronic technician for almost 25 years now. My goal here is to help you fix your PS2 quickly and at a cost well below what you would pay a repair shop to do it for you . I have broken down the steps into simple terms and hopefully made it a task that almost anyone could do. I hope it works for you. Even if the guide does not fix your particular problem I have shown you how to get a working one for the price of a simple repair at most repair shops. Don't get hung up on getting YOUR PS2 fixed. Your goal should be to get a working PS2 and that's it.

Sincerely,

Mark Eastman

This manual covers 2 main areas for the do-it-yourselfer. Power and disc reading problems. Look at the table of contents and follow it to fix your problem.

## FIRST THINGS FIRST

When working on your PS2 you need to always make sure you are working in a clean, well-organized environment. Always make sure your PS2 is **UNPLUGGED. NEVER** work on your PS2 on carpet. The carpet static can actually cause damage to the PS2. Move to an area that is not carpeted, like a kitchen table.

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## VOLTMETER TRAINING

IF YOU KNOW HOW TO USE A VOLTMETER TO READ VOLTAGES AND MEASURE RESISTANCE THEN YOU CAN SKIP THIS SECTION

Before doing some of the techniques in this manual you are going to need to know how to use a voltmeter. They are very easy to use and it won't take long to get you up to speed even if you have never used one before. If you don't own a voltmeter then you may need to buy one or borrow one. **WAIT TO SEE IF ONE IS REALLY NEEDED BEFORE BUYING ONE!** Each section tells you what tools are needed to complete the testing and troubleshooting in that section.

Here is what my voltmeter looks like. They come in various shapes and sizes and can be picked up at most hardware stores or at Radio Shack. They can be very expensive or you can get them pretty cheap. **A cheap one is all that is needed for this project.** Notice that there are two wires coming out of it. One is red and the other black. Red is the (+) **positive** lead and Black is the (-) **Negative** lead. None of the measurements we will be doing are dependent on having the positive and negative leads connected in a particular order. All of the measurements can be taken with either lead in either position indicated. That will make it easy for you.



Next, we need to go over the setting on the voltmeter that we will be using. This will vary from meter to meter. Most of them use the same symbols and wording so you should be able to figure it out on yours by looking at the description and picture here. The first setting is Ohms (See picture). This is the setting you use to check fuses and to adjust the laser voltages. All measurements you will be taking are less than 2000 Ohms so you will need to pick the scale that most closely matches this setting. Many meters, like the one shown use an auto-scaling feature. This makes it so you don't have to worry about what scale to pick. So if you have to buy a meter you may want to pick one up that has this feature built in.



That's it for the voltmeter training. In each section that we use the voltmeter there will be more detailed instructions on exactly what to do. So don't panic if you don't feel like you quite understand it yet. You will get more details when needed.

## POWER SUPPLY PROBLEMS

### TOOLS NEEDED:

- Normal Philips head screwdriver (Hardware Store)
- Needle-Nosed pliers (optional)
- Voltmeter (Hardware store or Radio Shack)

If you are experiencing power supply problems then more than likely your Playstation 2 will not come on at all. It is plugged in and the switch is on, but you have no lights. There are a couple of things you can check that may be a simple fix to your problem. **WARNING-ALL TESTING THAT IS DESCRIBED HERE IS DONE WITH THE PS2 UNPLUGGED. PLEASE MAKE SURE YOUR UNIT IS UNPLUGGED BEFORE TESTING TO PREVENT ACCIDENTAL ELECTRICAL SHOCK.**

- First, make sure that the outlet you are plugged in to is good by **unplugging** you PS2, and plugging it into a socket in a different room. If it doesn't work there either then proceed to the next step.
- Before we take any measurements we need to make sure the voltmeter is working. Put the meter on the Ohms setting. Test it by touching your red and black lead together. You should get a reading of 0 or a very low number when touched and nothing when not touching.



To test the power cord take one lead and attach it to one prong that plugs into the wall and the other lead into one of the holes that plug into the PS2. You should get a low reading just like you did when you tested above. If not, move to the other hole. Do that for each hole and prong to check both wires inside the cable. If both check good then you are ready for the next step. If not, then you have a bad cord and it will need to be replaced.





**The remaining checks will require that the PS2 cover be removed. Follow these steps to safely and easily remove it.**

A. Flip your PS2 over so that the bottom is facing up



B. Remove all the screw covers. (There should be 6 screw covers, 4 made of rubber (outer edges) and 2 made of plastic (in the middle), that need to be removed. **Indicated in photo by the white lines.** You can use a knife or small jewelers flat blade screwdriver for this. There should be 2-4 more screw covers on the **outer** side of the base, underneath the controller ports. **Indicated in photo by red lines.** The older model PS2's have 4 screw covers, while the newer ones have only 2. Remove them all, and you should now have a total of 8-10 screws unveiled. Set the screw covers aside.



C. Use your knife to cut the warranty tape that is covering the seam between the back and the top cover. (By the power switch). Just trace the seam through the tape with the knife so that it will not be holding you back when you go to remove the top later.



D. Using the normal sized Phillips head screwdriver, Make sure all of the screws are removed, and put them aside.

**NOTE:** Some of the screws are longer than others. It is **VERY IMPORTANT** that you remember where the longer screws go. You may want to mark the holes with a piece of tape or some other way so that you will know which holes the long screws go into. If you do not remember where the long screws go, you could put a hole through a circuit board by trying to force the long screw in where it is not supposed to be.

E. The PS2 shell should now be ready to remove. ONLY the UPPER side (with the PS2 logo) needs to be removed for this step - Leave the BOTTOM side on. **WARNING-Be very careful when taking the upper shell off, or you could damage the PS2.**

Place the PS2 horizontally, with the PS2 logo facing up and the front facing you.



Pull up on the cover from the back and work it free and lift about 1/2 inch. Move the shell forward a little, sideways, so that the **Eject/Reset buttons** are **not blocking** the shell and the CD tray comes clear, and it can be lifted off. Just play around with it a little and you should get it.

Then, lift it at an angle, like opening the cover of a book. Take the bottom (Vertically speaking) of the shell, with the PS2 logo on it, and lift it an angle.

**WARNING-Lift slowly and be careful not to break the ribbon cable going to the reset and eject buttons.**

You should notice a small wire around the area where the Reset/Eject buttons are. The wire should be taped to the top of the Lens cover. Remove the tape, and then carefully lift the cover so that it is lying flat, and the PS2 is open like a book, connected at the middle by the wire.



**OPTIONAL: If you have or can get a couple of clips that hold stacks of paper they make an excellent clip for holding your PS2 cover firmly to the PS2 base. This will reduce your risk of accidentally tearing your ribbon cable. See photo.**



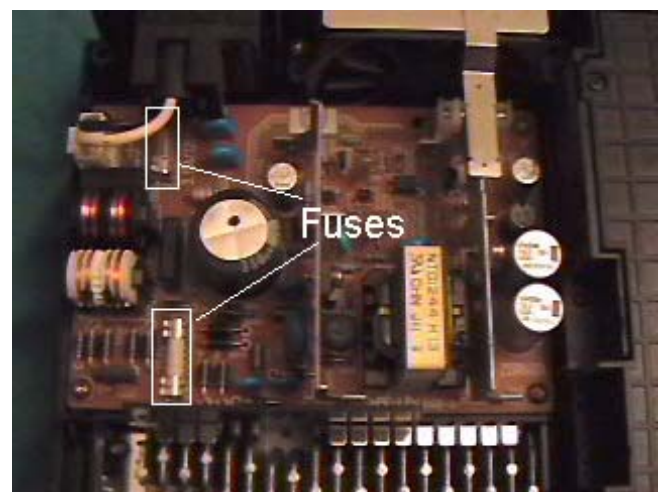


Now we are going to test the power switch. **MAKE SURE THE POWER SWITCH IS IN THE ON POSITION.** Put one voltmeter lead on one of the pins that the power cable plugs into and the other on one of the pins of the white plug just inside the case. You should get a 0 reading or a short. If not trying moving to the other pin. A good plug will show a short between each pin on the back and one of the wires on the inside when the power switch is in the on position.



Last we will check the fuses. There are two located on the power supply board. (see photo)

Take your voltmeter and put a lead on each side of a fuse. You should read a short. If you don't, then the fuse is blown and will need to be replaced. Read the value of the fuse either written on the circuit board beneath the fuse or on the silver connection on the end of the fuse. The fuse by the power plug on mine is 3.25A (amps).



Every version of PS2 has a slightly different set of fuses in it. To convert the numbers on the fuses to an actual value take the number and multiply by .04. For example, if the number on your fuse is 25 CCP2E25 then you take  $25 * .04 = 1.0$  or 1amp. You would use a 1 amp fuse to replace this one. If you end up with a weird amperage like .52 just use a .5 amp fuse. You just need something close as possible to the actual value to keep things working safely.

You can get your replacement fuses at Radio Shack or any electronics store. Replace them and if they blow again then you have more serious problems with your power supply board and it is suggested you seek out a replacement. Just search the internet for PS2 parts and find a replacement board. I found them to be about \$35.00.



When you get your replacement board, just take out the 4 screws on the corners holding it in and pull up on it to remove it from the 4 pin connector (see photo). You will also need to slide the power switch assembly out of your way. Unplug the white 2 wire connector from the power supply board and slide the assembly out of the slot it fits in on the case. (see photo)

That's it for the Power Supply troubleshooting section of this manual. Hopefully this fixed your problem. If not, then it is a problem that would be better off being fixed by a professional. Since some shops want up to \$120.00 to fix a problem you would be better off selling your console on Ebay for parts and picking up a working used one from the same place.

## **END OF POWER SUPPLY SECTION**

## DISC READ ERRORS

It seems that there are many people who are having disc read errors on their PS2 consoles for no apparent reason. They get it on some discs or DVD's and not on others. There is no logical pattern to the problem. Obviously you don't want to pay someone \$120.00 to fix the problem, and so you have purchased this information in hopes of getting to the bottom of it.

A study of the problem reveals that there can be a couple of different things causing it. First, is the laser that reads the disc is dirty. Since lasers are very sensitive, it only takes a small spec of dirt to mess the whole thing up. Second, it could be that the disc is not spinning on the spindle correctly, thus the laser cannot read it. Certain games (mainly blue discs) not working and others working fine usually signify this problem. One other symptom of the disc not spinning on the spindle correctly is that you will get some scratching noises while the game is in. This **NEEDS** to be repaired before your games are ruined.

All of the procedures listed are simple and easy ones that practically anyone can do. They are listed in order from the easiest fix to the hardest. Even the hardest one is not that hard but why go through the trouble if you don't have too? Please **DO NOT BE IN A HURRY** and jump into this without completely reading the steps in the process and making sure you understand them before getting started.

**Try this before you do anything else.** Get a can of compressed air. Eject the CD tray outward and spray the air into the PS2 aiming it at where the laser is located. This may be all that is needed to fix your problem.



## DIAGNOSTICS MODE

This procedure rarely works for anyone but since it only takes a few minutes to do it is worth a try before opening up your Playstation 2 console.

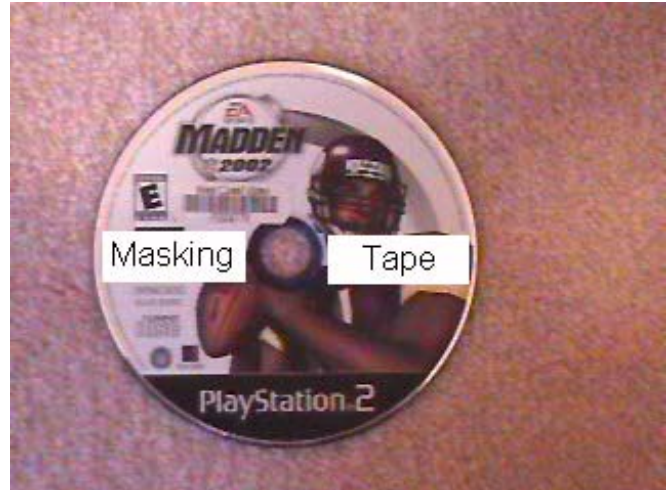
- Turn on your PS2 **WITHOUT** a disc in it and wait for it to come up to the MAIN MENU screen
- Press the "Triangle" button
- Use your UP directional buttons and select CONSOLE and then press the "Triangle" button
- Use your direction buttons again and select ON and then press the X button
- Insert a disc and the console will automatically start the diagnostics

**MOVE ON TO THE NEXT STEP IF THIS DID NOT WORK**

## FIXING DISC SLIPPAGE

A disc slipping can be the culprit that is causing your read errors and it is quite easy to fix. The reason that the discs are slipping is because the magnet around the spindle has weakened and it allows the disc to slip when it begins to spin. The first two steps listed here are ways to increase the weight of your discs and balance them to prevent the slippage. These are both methods being used successfully by others, but obviously these are not technically based fixes. These fixes are a quick fix to the underlying problem and **may not** fix the problem. Use them if you want, but if you don't feel comfortable putting tape on your discs knowing there is a possibility that your problem will still not be fixed then go directly to STEP 3

**STEP 1.** Take a strip of masking tape and place it on the title side (*side with the writing*) from the very edge of the disc towards the middle of the disc without getting any on the shiny part in the center of the disc. Then take another piece and do the same thing on the other side of the hole so that when you're done you will have a straight line going across the title side of your disc. Stick the disc back in and see if your problem is solved.



**STEP 2.** This is another variation of the first trick. On the shiny side of your disc- (*the play side*) take a small piece of 1/2 scotch tape and place it at an angle in the center circular area by the hole. That's it-stick the disc back in and see if the read error is fixed. Doesn't get much easier than this.



The next procedure is the actual strengthening of the magnet and the cleaning of the laser lens. It is a bit more involved but the chances that this will get your machine working again are high. Before you try the remaining repair steps in this manual you may want to print out a copy of these instructions. It's not really that hard and using a little common sense will go along way towards helping you make the repair quickly and easily.



**STEP 3.** Make sure you have a nice, clean, well-lit area to work in. You might want to get a small bowl or cup to put your parts in so you will not lose them.

The things you need for this next project are:

- Normal Philips head screwdriver (Hardware Store)
- Jewelry (Small) Philips head screwdriver (Radio Shack)
- Q tips (Drug Store)
- Rubbing Alcohol (Isopropyl) (Drug Store)
- A very small low strength magnet. You can get one from Radio Shack (P/N 64-1895) or **Try this** - Ever seen those refrigerator shopping lists made from that very thin sheet magnet material? Cut two small pieces and use them. (Walmart or Kmart for sheet magnet)
- Compressed air (Radio Shack)
- Needle-Nosed pliers (optional)
- White silicone grease (optional)

A. Flip your PS2 over so that the bottom is facing up.



B. Remove all the screw covers. (There should be 6 screw covers, 4 made of rubber (outer edges) and 2 made of plastic (in the middle), that need to be removed. **Indicated in photo by the white lines.** You can use a knife or small jewelers flat blade screwdriver for this. There should be 2-4 more screw covers on the **outer** side of the base, underneath the controller ports. **Indicated in photo by red lines.** The older model PS2's have 4 screw covers, while the newer ones have only 2. Remove them all, and you should now have a total of 8-10 screws unveiled. Set the screw covers aside.





C. Use your knife to cut the warranty tape that is covering the seam between the back and the top cover. (By the power switch). Just trace the seam through the tape with the knife so that it will not be holding you back when you go to remove the top later.



D. Using the normal sized Phillips head screwdriver, Make sure all of the screws are removed, and put them aside.

**NOTE:** Some of the screws are longer than others. It is **VERY IMPORTANT** that you remember where the longer screws go. You may want to mark the holes with a piece of tape or some other way so that you will know which holes the long screws go into. If you do not remember where the long screws go, you could put a hole through a circuit board by trying to force the long screw in where it is not supposed to be.

E. The PS2 shell should now be ready to remove. ONLY the UPPER side (with the PS2 logo) needs to be removed for this step - Leave the BOTTOM side on. **WARNING-Be very careful when taking the upper shell off, or you could damage the PS2.**

Place the PS2 horizontally, with the PS2 logo facing up and the front facing you.



Pull up on the cover from the back and work it free and lift about 1/2 inch. Move the shell forward a little, sideways, so that the **Eject/Reset buttons** are **not blocking** the shell and the CD tray comes clear, and it can be lifted off. Just play around with it a little and you should get it.

Then, lift it at an angle, like opening the cover of a book. Take the bottom (Vertically speaking) of the shell, with the PS2 logo on it, and lift it an angle.

**WARNING-Lift slowly and be careful not to break the ribbon cable going to the reset and eject buttons.**

You should notice a small ribbon cable around the area where the Reset/Eject buttons are. The cable should be taped to the top of the Lens cover. Remove the tape, and then carefully lift the cover so that it is lying flat, and the PS2 is open like a book, connected at the middle by the ribbon cable.



**OPTIONAL: If you have or can get a couple of clips that hold stacks of paper they make and excellent clip for holding your PS2 cover firmly to the PS2 base. This will reduce your risk of accidentally tearing your ribbon cable. See photo.**



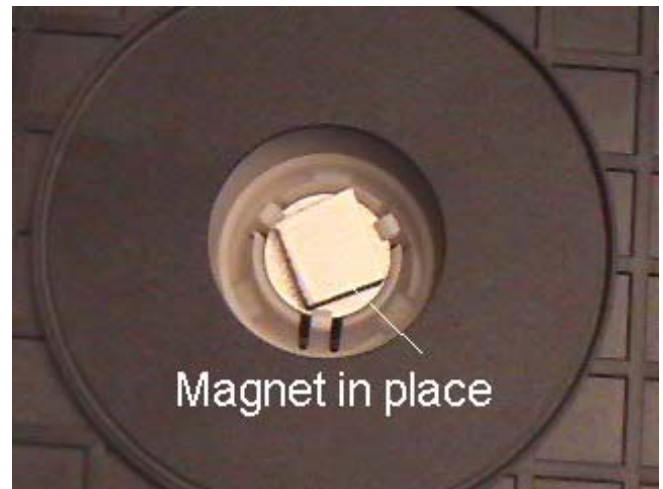
F. Use the compressed air and spray out the inside of your PS2, especially the fan. When you feel like all dust has been removed proceed. If your PS2 has a foam mesh that is located next to your exhaust fan then you need to REMOVE IT. This mesh has been known to collect dust on the inside of the PS2 and makes the DISC READ ERRORS worse. Newer versions of the PS2 have this removed.

G. Look for a small white circle with a little gray piece of metal in the center.

H. Stick your replacement magnet (from old HD, etc) on the metal. **NOTE:** If using a sheet magnet cut two small pieces and stick them on the metal.- The idea is to increase the strength of the existing magnet.



**NOTE:** Here is a picture of the one I just did with the sheet magnets in place. It's up to you at this point if you want to continue. This may be all that is needed to fix your problem. Put the cover back on and try it out. If it doesn't work you will need to take the cover back off and then continue with the next step, or you can continue now. The choice is yours.



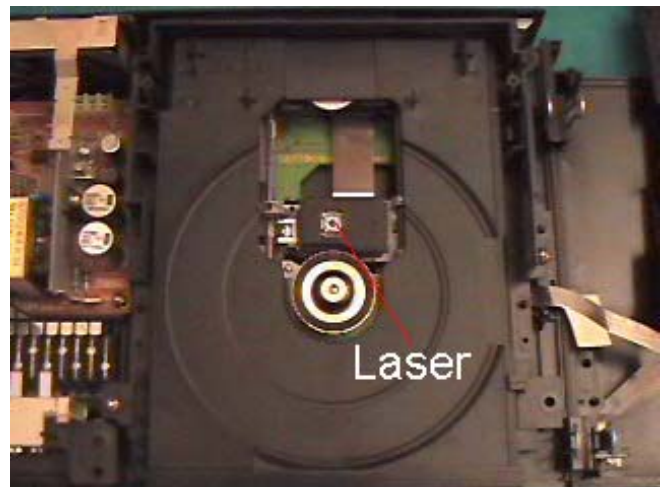
I. Next you will clean the laser lens. To gain access to the lens, you need to remove the lens cover. The lens cover is the piece that holds the place where you just attached the magnets. To remove the lens cover, simply take out the 2-4 screws located on the side with the Jewelry screwdriver. Place the screws aside, and lift the lens cover. **NOTE:** The lower left corner has a latch tab that needs to be pulled slightly left before you can lift it up. See photo.



You should now see the lens, a small circular glass piece located in the back of the disc tray.

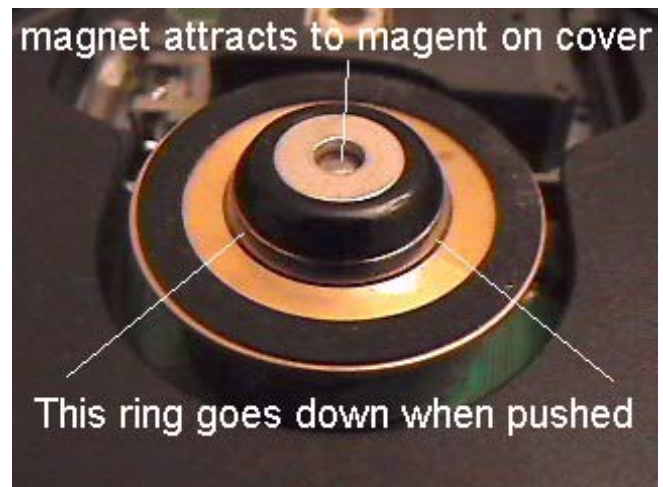
J. Spray the area around the lens with the compressed air.

K. Dip a Q-Tip in the rubbing alcohol. Make sure that you don't fill it so much that it is dripping. Take the Q-Tip and carefully yet firmly rub the lens in a circular motion for 30 seconds. Then, using a dry Q-Tip, dry off the lens in the same circular motions. The lens should now be clean.





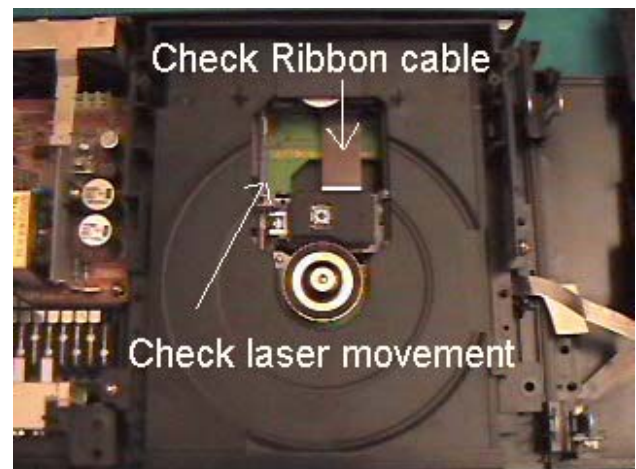
L. This next photo is just to show you a little more detail on what is going on around the spindle. The magnet on top attracts to the magnet in the cover and pushes the game down onto surface. The black rubber ring is what touches the game in the center so make sure it is grease free. You might want to brush it with the rubbing alcohol while you are cleaning the lens. The silver ring is spring loaded and goes down when pushed. Make sure it is moving or else your game will not seat firmly. Just put a game on the spindle and slightly push down on it. You should see it move.



M. One more check can be done while you have the covers off. GENTLY push the laser assembly backwards to see if it is sliding freely on the travel rods. **It will feel a little rough since the power is off**. You are looking to make sure that the laser assembly is not coming into contact with anything else and can travel freely. You want to also make sure that the ribbon cable attached is not bending as the laser assembly moves backwards. If there is a bend in the cable you can strengthen it by wrapping a small piece of paper around the bent joint and taping it with scotch tape. Just make sure that the ribbon has free travel back through the slot it goes through in the case. **This problem is rare.**

**OPTIONAL:** *If you want you can clean the rods with Q-tips and reapply a thin layer of lubricating gel. (Radio Shack-#64-2326) Don't use to much.*

**Make sure to do the optional step above if you have grinding sounds coming from your PS2**



N. Put the PS2 back together. Place the lens cover back on, making sure that it's tight and snug in position. Screw it in place. Then, tape the wire back onto the lens cover and flip the shell back into place on the PS2. Screw the screws back in, making sure the longer screws are going into the correct holes. Put the screw covers back into place, and you're done.

One of these techniques should have fixed your DISC READ ERROR problems. Your PS2 should now be ready to go. If it is still not working then you have more serious problems than most. The laser may need to be replaced or the voltage adjusted. See the table of contents for the latter.

## SECOND DISC READ ERROR ADJUSTMENT PROCEDURE

**Read through this entire procedure before starting so you have a clear understanding of what needs to be done.**

If the previous procedure did not work for you there is one more thing you should try before going with the laser voltage adjustment procedure. This will only work on version 3 and higher PS2 consoles. If you don't know what version you have it won't hurt to try the procedure, but the problem is that the adjustment you make will not stay on version 1 & 2 consoles. It will revert back to it's default setting.

Before you get started you need to have as many different types of game disc as you can to make the best possible adjustment. Get a DVD, a silver or gold back disc, and a purple or blue back disc. When you have one of each then you can proceed.

1. Use the repair guide to remove your top cover again
2. Remove the disc tray assembly cover again just like you did when you were cleaning the lens.

**Take a look at the picture on the right. The small white wheel is what you are going to be adjusting in this procedure.**

**You will be able to see it better when the cd tray is ejected.**



What this little wheel does is adjust the angle of the CD tray. This will effect the angle that the laser hits the CD. Do not get carried away making big adjustments on this. It only takes a small change to get BIG results.

**WARNING- You are going to have to plug in your unit and hook it to a TV just like you were going to play it to make this adjustment. It is very dangerous to work on electrical equipment with the covers off. You could be shocked or killed. Be extremely careful-Don't be in a hurry!**

1. Hook the unit to the TV and plug it in and turn it on.
2. Press the eject button so that the tray slides forward.
3. You should now have a clear view of the wheel pointed out in the picture above. You will also see a metal tab that hold the wheel in place.
4. Take a felt tip marker and mark the point where the wheel meets the tab so that you will always be able to go back to your starting point.



5. Turn the wheel about 1/8 of a turn. Put the CD tray cover back on. You DO NOT need to put the screws in. just hold it down lightly with your hand. Put in one of your game discs and push it in and see if it works. You may have to use the browser to load each disc you are testing.

If it works then eject the tray and try another disc. Do this for each disc you have. If you can get all three types to load and play then you are done. Turn off the unit and reassemble.

If all three do not work, then turn the wheel another 1/8 turn and try it again. Keep doing this until you find the spot where all three discs will work for you.

**REMEMBER- If you open the cover after testing and the wheel is back to it's original position then you have a version 1 or 2 PS2 console and this will not work for you. There is nothing you can do to make the wheel stop returning to it's original position.**

## LASER VOLTAGE ADJUSTMENTS

**WARNING!-Adjusting your laser voltage is pushing the envelope of a do-it-yourself procedure. This should only be done as a last resort for getting your games to work. Do not do this until you have tried the cleaning of the laser lens and the increasing of the magnet strength.**

### DO NOT ADJUST THE LASER VOLTAGE IF:

- If you do not get the "Disc Read Error" message in the browser when trying to load problem discs.
- You have a Playstation 2 Version 4 or higher- They have 8 screw covers on the bottom rather than 10. (*No solid techniques have been developed for Version 4 and higher-You can attempt to do it with these instructions but you may find that things are not as described here.*)
- Your PS2 only gets errors on certain CD or DVD games and not **ALL**.

### YOU MAY NEED TO ADJUST THE LASER VOLTAGE IF:

- You can play games on CD but not on DVD
- You can play games on DVD but not on CD
- You can't play **ANY** games and have already cleaned the laser in the steps listed earlier.

### TOOLS NEEDED:

- Philips head screwdriver
- Very small jewelers flat blade screwdriver
- Needle-nosed pliers (optional)
- Voltmeter
- A friend to help

Adjusting the laser voltages involves taking the bottom off of your PS2. So let's get started.

A. Flip your PS2 over so that the bottom is facing up.

B. Remove all the screw covers. (There should be 6 screw covers, 4 made of rubber (outer edges) and 2 made of plastic (in the middle), that need to be removed. **Indicated in photo by the white lines.** You can use a knife or small jewelers flat blade screwdriver for this. There should be 2-4 more screw covers on the **outer** side of the base, underneath the controller ports. **Indicated in photo by red lines.** The older model PS2's have 4 screw covers, while the newer ones have only 2. Remove them all, and you should now have a total of 8-10 screws unveiled. Set the screw covers aside.



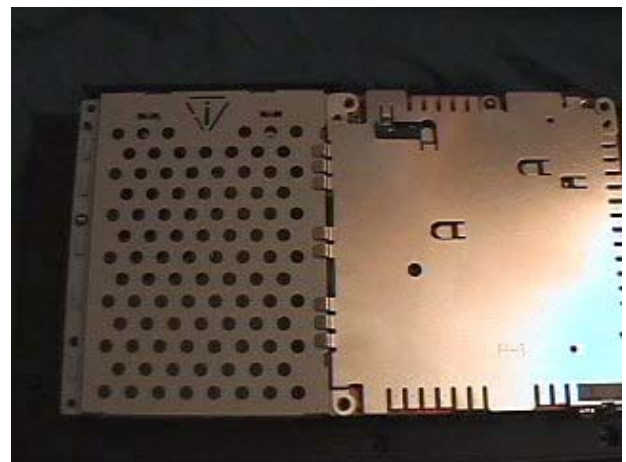
C. Use your knife to cut the warranty tape that is covering the seam between the back and the top cover. (By the power switch). Just trace the seam through the tape with the knife so that it will not be holding you back when you go to remove the top later.



D. Using the normal sized Phillips head screwdriver, Make sure all of the screws are removed, and put them aside.

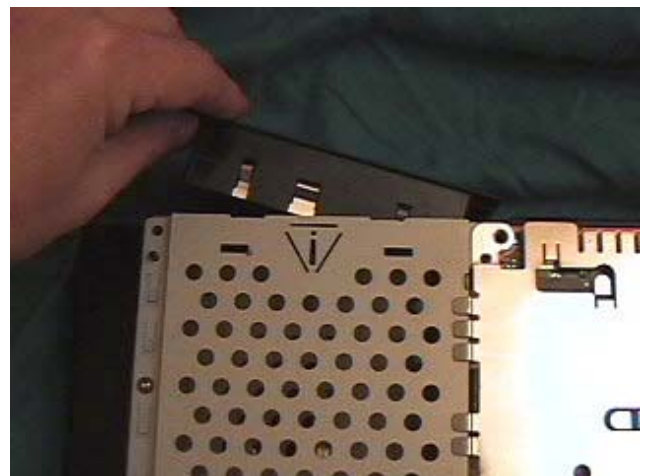
**NOTE:** Some of the screws are longer than others. It is **VERY IMPORTANT** that you remember where the longer screws go. You may want to mark the holes with a piece of tape or some other way so that you will know which holes the long screws go into. If you do not remember where the long screws go, you could put a hole through a circuit board by trying to force the long screw in where it is not supposed to be.

E. Gently pull up on the back of the bottom cover and slide it forward and place it on the side. You should see two metal shields covering the circuitry on the bottom.



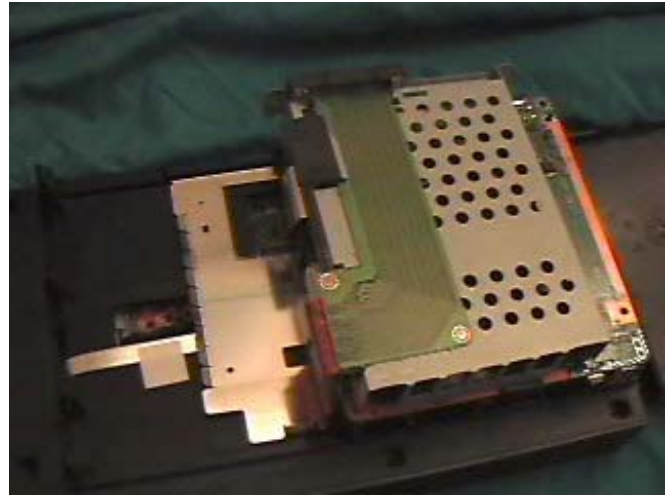
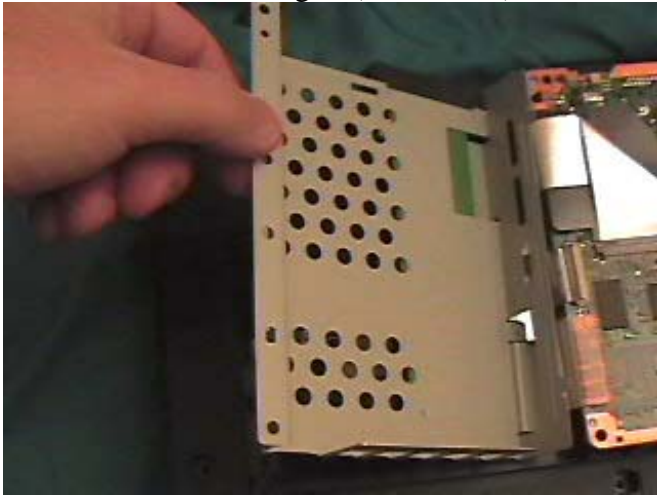
F. Remove the expansion slot cover from the back of the PS2. It just slide out

G. Remove the 1 screw in each plate that is holding it down and gently remove both shields.

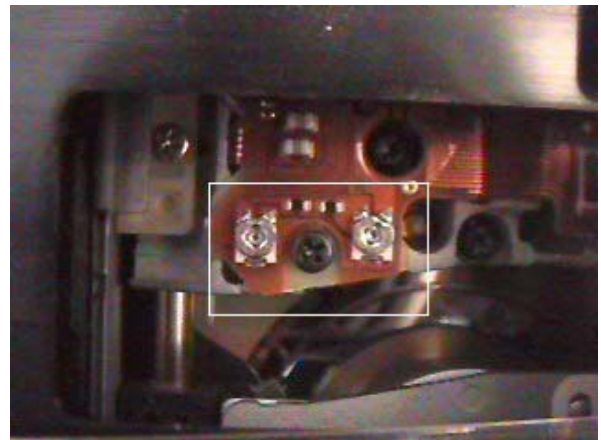


H. Now that the shields are removed you are going to lift and fold back the expansion slot to reveal the laser voltage adjustments. **BE VERY CAREFUL-YOU WILL BE MOVING RIBBON CABLE AND CAN BREAK IT IF NOT DONE CAREFULLY.**

Gently pull up on the outer edge of the expansion bay and fold over to the right and GENTLY lay it on top of the circuit board to the right. (See Photos)

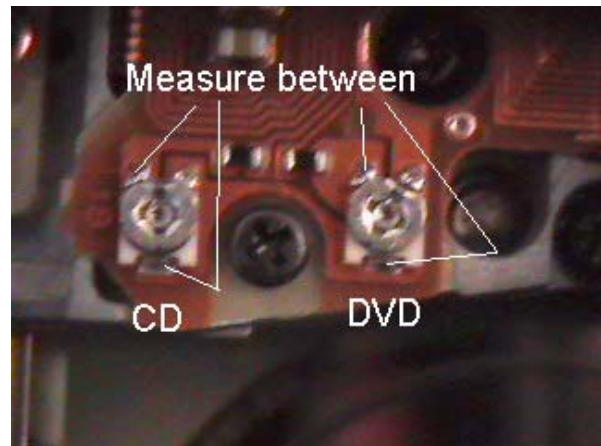


I. Now that the expansion slot is out of the way you should be able to see the controls that adjust the laser voltage. (See photo)



J. The one on the left is for adjusting CD games and the one on the right is for adjusting DVD games. Make sure you only mess with the one that is giving you problems. **Before you get started you should carefully mark the current location of the adjustments so you can go back to them if needed. You can do this by using a sharpie pen to put a small dot at the 12 o'clock position on each screw and then another on the circuit board to line it up with. When turning the adjustments you only need to turn VERY SLIGHTLY. (1 degree at a time) Turning to the right is increasing the voltage and to the left is decreasing the voltage. In most cases you will want to INCREASE the voltage.**

K. Before you get started lets get a reading of exactly where the adjustment is set. Using your voltmeter in the Ohms reading setting put 1 lead at the bottom of the adjustment and the other in the upper left corner (see photo). Write this reading down so you can go back to it if needed. Using a very small screwdriver carefully turn the adjustment to the right about 1 degree. Take a measurement again. **You will then have to put everything back together and try it.** If it does not work you can keep adjusting it over and over until it works. **I have found that the CD adjustment can be anywhere between 950-1200 ohms and the DVD can be between 650-1000 ohms.** This can be a very time consuming process but it will work for some of you. The key is to be patient and careful. If you get in a hurry you may pass the point where it works or you may damage something taking it apart.



## OPTIONAL ADJUSTMENT PROCEDURE

Use this procedure at your own risk and the risk of damaging your Playstation 2. This procedure will speed up the process for you but it involves working on the Playstation 2 while it is plugged in and circuit boards are exposed. The choice is yours.

### HERE WE GO:

- Stand the PS2 on it's side so the power button is at the top. Have a friend hold it for you and make sure that the expansion bay does not touch the exposed circuits on the adjacent board.
- Plug in the PS2 (power and video) and load a problem disc.
- Turn the adjustment pot 1 degree and reload the disc to see if it helped.
- Repeat the process until you have moved the adjustment 20 degrees. If you have not had success move it back to the beginning spot and go the opposite direction up to 20 degrees.

I have never seen the adjustment needed to be turned more than 30 degrees although I have heard that some people have had to turn it up to 180 degrees on PS2 that have a modchip and they are reading backup CD-R games.

Before you finish lower the PS2 to the horizontal position and try the game as well as several others to make sure you don't need some more fine adjustments. Some people have reported that a slightly higher setting is needed in the horizontal direction than in the vertical.

Turn off your PS2 and reassemble.



## MY PLAYSTATION 2 IS STILL BROKEN-NOW WHAT?

Hopefully you were able to fix your Playstation 2 and are now back to playing games. If you are reading this though then that means that the methods did not work for you. Don't worry.

In this next section I'm going to show you how to get rid of your broken PS2 console and get a WORKING used or maybe even a NEW one for a net cost of less than \$100.00 which includes the price of this guide. So, you see you are still better off then you were if you had paid the \$120 for repair.

I will guide you step by step how to do this.

The way we are going to do this by selling your broken PS2 for parts on [Ebay](#) which should get you a price between \$50 - \$85. After that you will buy a working PS2 either new or used for between \$125 - \$175. If you do the math you will see that your net cost will be around \$75.00. If you add in the price of the manual then your total cost is still only \$95.00 which means you have saved over \$25.00 by NOT paying the \$120 to repair your PS2.

# INTRODUCTION TO BUYING AND SELLING ON EBAY

Ebay is in my opinion the absolute best place on the internet to get a deal on ANY item. If you have never explored Ebay then you are in for a real treat. Before you begin dealing in this new world I want to make a couple of points that are CRITICAL to your Ebay future.

## 1. Sign-up for a [Paypal](#) account.

Paypal was recently purchased by [Ebay](#) and is becoming an integral part of accepting and making payments for auctions on Ebay. The benefits of Paypal are that you don't have to wait for days to get paid or to make payments, thus you can finish a transaction quickly.

Paypal does charge a small fee for their services but it is well worth it. You will not have to write out a check, deposit a check, get a money order, or mail anything. Having a Paypal account also allows you to accept payment from people who want to pay by credit card.

If you paid for this guide through Paypal then you are already a member. You can verify your address and setup your bank account with them and start accepting and making payments quickly. Just login to your Paypal account and follow the directions to do it.

## 2. Develop your feed back rating.

Your Ebay reputation is based on feedback you receive from other Ebay members after you have completed a transaction. It is **EXTREMELY IMPORTANT** to keep your feedback positive. The higher your feedback number goes the better people feel about dealing with you. The same goes for you when buying from someone on Ebay. Look at their feedback number. The higher the better. You can click on the number and read what others have said about that particular member. Below is a picture of what you will see when looking at an auction page. Note the red lines pointing to the buyer and sellers feedback rating. This is what you want to keep going up on your own account and what you want to look at before buying from someone else.



**P.S. marke is my personal Ebay membership. As you can see I have developed a rating of 165.**

Buying on Ebay is a legally binding contract between you and the seller. **REMEMBER THAT!** Don't bid if you don't intend to buy. Don't bid and then buy it somewhere else unless you know that you are not going to get it.

Ebay charges sellers fees for listing their goods. Plus, you are charged a fee based on the final selling price. If you bid and then don't pay the seller is still charged the fees by Ebay and has to file a complaint with Ebay about you and then request a credit to get his/her money back.

If the complaint is filed then Ebay will send you an email telling you this and give you 10 days to work things out. If you don't then Ebay will issue you a warning when the final credit request is given. You get 3 warnings and you are gone from Ebay forever.

So, be a good Ebayer from the beginning. It's a great place to do business. Pay for what you bid for and win and stay in contact with the seller after the auction. **Treat others as you want them to treat you.**

**HELP TIP-** You don't have to do this but it might get you a higher price for your PS2 console. Buy a few items that you need (*a couple of PS2 games*) and get the seller to post feedback for you. Make sure to do the same for him/her. It makes people feel better when spending money to see a good feedback rating versus a 0. Some people will not bid if your feedback is 0 so the price of your item does not reach it's full potential.

## HOW TO BUY AND SELL ON EBAY

Getting Registered On Ebay – *Required for buying and selling*

- [Click Here](#) to go to the Ebay Website
- At the very top of the page click on the “sign in” link
- On the left hand side of the page click on the “Register” button
- Fill in the blanks and make sure that you use a valid email address- *you will have to verify your information with it.*

**HELP NOTE-** When picking a username –**DO NOT** pick a name that might be offensive to others or that might be viewed as illegitimate. You will be dealing with people that don't know you, and you don't want to start off on the wrong foot. Here are some examples – illwill , demonspawn, agentbadboy,serpentile. You get the idea?

After that there will be a couple of more steps and you will be sent an email to confirm your registration. Follow the instructions in the email to successfully setup your new Ebay account.

## SELLING ON EBAY

Next I will walk you through selling your broken PS2 console on Ebay. Included are links to some tools to help you get a higher price if you want to use them. (***You don't have to use my tools-they are there if you need them***) Let's get started.

- Sign in
- Click on the SELL link at the top of the page
- Make sure that the “Sell Items at online Auction” is clicked and then press “Continue”
- Next is the category selection – First In Box 1 Click on “Consumer Electronics”
- In Box 2 Click on “Video Games”
- In Box 3 Click on “Sony Playstation 2”
- In Box 4 Click on “Systems”
- Go to the bottom of the page and Click “Continue”

Next you will begin to enter the information you need that will pertain to your auction. First is the Auction Title and then the Description. The Description can be just typed in by you or you can use HTML (Webpage) format to make your auction page a little spiffier. I have made a HTML auction template for you that can be downloaded by [clicking here](#). Save it to your desktop and open it up and copy and paste it into the Description box if you want to use it. – More about this later.

OK..let's get started on the next part of getting your auction listed.

- In the Item Title Box Type **"Playstation 2 Console – Needs Repair"**
- Now if you are using my template you need to copy it and paste it into the Description Box. If you are not going to use it then you need to type in your description. ***NOTE- If you use my template you can change the description by adding or deleting text, just be careful to NOT delete any of the coding around and in the text.***
- Go to the bottom of the page and click on the "Continue" Button

Your now page 3 which is called "Pictures and Details"- Follow the steps below for each

- **Duration** – 7 days is a good auction length.- You can go longer if wanted but it will cost you.
- **Start Time**-Start the auction right after your done. **Note- It's best to start between 6-10 PM.**
- **Quantity**- "1"
- **Starting Price**- "9.95"
- **Reserve Price**- This is optional. If you don't care how much you get for your console leave it blank. If you don't want to sell it unless you get a certain amount then put that amount in this box. This is kept secret from bidders but if your price is not met then the auction will say "Reserve Price Not met" Having a reserve price will sometimes discourage people from bidding. Personally on an auction for a broken PS2 console I wouldn't care what I got for it. It's worthless as is.
- **Buy it Now Price**- This is optional. This is a price that you will take for your console right now. In other words if you will take \$60.00 then put \$60.00 in this box and someone can end the auction instantly buy paying you \$60.00 for your item. This only works until someone else bids on the auction at your starting bid. Once that happens then the BUY IT NOW option will go away.
- **Private Auction**- Leave this Unchecked
- **City, State**- Just Put the State you are shipping from
- **Region**- I do not use this but you can if you want. Just select the Closest major market you live by.
- **Pictures**- This is where you would normally add your pictures. I have a default PS2 console picture included in my template so there is no need for you to add any unless you want to.
- **List Designer**- You can use this if you want but NOT if you are using my template. If you want to use this you can but you will need to have your own picture to upload.
- **Gallery Picture**- No need for one on this auction
- **Listing Upgrades**- No need for any
- **Gift Services**- Do Not show as a gift
- **Free Page Counter**- This is up to you
- **Click "Continue" at the bottom of the page**

The next section is Payment and Shipping

- **Seller Accepted Payment Methods** – Just Click on all of the buttons that apply to you. If you will accept Paypal then make sure to put your Paypal email address in the box listed.
- **Shipping Costs** – Buyer Pays Shipping Costs – And if you use my template it states that \$12.00 is the Shipping cost so you can fill in the blanks on the next part. Insurance is optional so make it so and put that price in. The cost of insurance is \$1.30 for the first \$50.00 and an additional \$1.00 per \$50.00 after that. So, \$2.30 would cover up to \$100.00.
- **Payment Instructions**- Tell them that you will contact them after the auction with payment instructions.
- **Ship to Locations**- Select "US Only" Shipping outside the US can be a REAL hassle. My auction template states that the shipping cost quoted is for the lower 48 states only. Shipping to Hawaii and Alaska can be more so you want to make sure to get an accurate price on shipping if your winning

bidder is from one of these two states and request the additional money required to ship.

- **Escrow-** Does not apply to this auction
- **Click “Continue” at the bottom of the page**

Next you will just review everything you entered to make sure it is correct before starting your auction. DON'T Worry if the description section looks a little squeezed together. It will look normal when displayed on a complete webpage by itself.

If you see a mistake just click on the link on the right hand side of that sections title that says “Edit Shipping and Handling” or “Edit Title and Description”. Then once you have made your changes on that particular page then Click on the “Save Changes” button at the bottom of the page.

When you are all done and ready to begin your auction click on “Submit Listing”

Your auction will be viewable almost immediately by millions of people and over the next seven days you should receive several bids and hopefully will get a nice price for your broken console. Somewhere between \$50 and \$80 dollars.

You may get a few emails from potential bidders wanting to know specifics about your PS2 console like model number and if controllers are included and things like that. Email them back as quickly as possible and BE HONEST.

## **THE AUCTION IS OVER- NOW WHAT?**

You will be sent an email from Ebay telling you that your auction is over. Of course you will probably be monitoring your auction and know it is over before you get the email but that's beside the point. For easy monitoring of all of your Auction activities use the “**My Ebay**” link at the top of any page.

The first thing you need to do is make contact with the buyer and giving him instructions on how he can pay and where to mail his payment to if paying by check or money order. Make this short and sweet. Be clear and give the exact price you are expecting from him/her. The auction price plus shipping. Ask the buyer to respond to let you know that they received your email and to give you a shipping address.. Give them a day or so, some people don't check their email but once a day.

Once the buyer responds you can expect to receive payment from them in a few days or within 1 week for sure. When you receive payment then send a quick email to the buyer and tell them you got it and when you will be shipping their package. If it is a check then you will need to deposit it and wait for it to clear. If it is a money order or if they pay by Paypal then you can ship immediately. Box up the console and pack it well. You can ship either USPS (post office) or UPS. If you use UPS then use the shipping option on Paypal (if you have an account.) It will save you some money.

I like to use delivery confirmation if sending by USPS for tracking purposes. This will cost you 40 cents but it is worth it knowing that your package has been delivered. UPS has tracking numbers on every package. If you have a tracking number you can also email that to your buyer so he can see that the package is on it's way.



**NOTE- I can't stress enough how important it is to stay in touch with your buyer during the exchange process. Try to think of it from his point of view. He is sending you money in the mail- He wants to know if you got it and what your next action is.-Did you ship it yet? If so, when is he going to get it? Lack of contact can really make for a BAD transaction. Even though everything goes smoothly it can make a person feel uncomfortable NOT knowing what is happening on the other side. If you contact the person and let them know what is going on they will feel much better and give you GOOD feedback at the end.**

Once you see that the buyer has received his item send him an email stating that and say thanks for the business and ask for positive feedback. Tell them that you will be leaving some for them as well. Don't wait for them to give you some before you give them some. Go to your "My Ebay" link and see what feedback you need to leave. Follow the instructions and you will be done. Hopefully the buyer will do the same for you but not everyone will leave you feedback. My rating is 165 currently but I have probably done over 300 transactions on Ebay. Some people just won't go through the steps, or they forget. You have 90 days to leave feedback on someone.

## **BUYING ON EBAY**

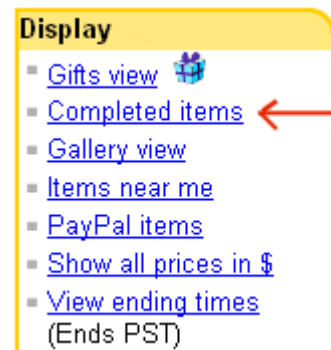
**Note- Even if you have bought on Ebay before you may want to read this section. I have included a couple of secrets that you might not know about on getting a good price.**

Buying on Ebay is a lot easier than selling. To find you a good working used or new PS2 console just do a search from the Home page for "PS2 console" or "PS2 console new". Either one of these should pull up multiple auctions for you.

To get an idea of what price you will have to pay just click on the "Completed Items" link on the left side of the page listed under the Display Heading.

This will show you all of the auctions that have ended in the last 30 days for the particular item you are searching for. You can use this to get an idea of how much you can expect to pay for the item that you will be bidding on.

You will want to read the descriptions of some of them to see if any accessories were included etc. Some items that seem like they went really cheap did so for a reason. You will need to read the description to find out why.



When you find an item you would like to buy take a look at the buyers feedback rating. Is it good? Read some of the feedback on him by clicking on the feedback number. This will give you a better idea of what you can expect if you buy from this particular person.

My advice is to steer clear of sellers with negative feedback. I don't mean 1 or 2 but a lot. You can be the judge but more than a few can indicate that the seller may not be organized or truthful. Whatever the reason you will be increasing your chances of having a bad transaction.

There are plenty of other people out there with good feedback that you can buy from so why risk buying from someone who has a bad feedback rating?

OK...enough said about that. Read through the descriptions of the auctions and look at the feedback rating of the seller. Look at the terms of the auction. Can you pay with Paypal, does he take checks? How much is shipping? All of these factors along with the description of the item being sold should help you decide what item you want to bid on.

**NOTE- In a hurry? Find an auction that you like that has the Buy it Now display on it and if that price is acceptable then go to the bottom of auction page and BUY IT NOW.**

If you are ready to bid on an auction then go to the bottom of the auction page and fill-in the box that says "Your Maximum Bid". That means the maximum price you are willing to pay for the item. Ebay will increment the bids but only high enough for you to be the high bidder. Here's a better way-Go to [Auction Stealer](#) . Signup for an account -It's FREE. Then enter the auction info into this account to attempt to steal the auction away.

What it does it bid on the auction in the last few seconds. That way your maximum bid is not sitting there waiting on someone to come along and run it up and then outbid you by \$1.00 in the last minute. Auction Stealer will monitor the auction and will not bid if the auction does not meet the requirements you spell out when setting up the bid. It's not hard and you can get 5 bids a week for free. If you want to use it beyond that you will have to pay a small fee.

Either way you should be able to acquire a working PS2 for about \$120.00. So your approximate net cost for getting a working console is  $\$120(\text{working console}) - \$60(\text{your broken console}) + \$20 (\text{This guide}) = \$80.00$ . A saving of over \$40.00 from the \$120 that some repair shops would have charged you. ( $\$120 + \text{shipping}$ )

## **I WON THE AUCTION NOW WHAT?**

If you win an auction you will receive notice from Ebay. If you have the option of paying by Paypal and that is the option you choose then goto the auction page and click on the Paypal link. Make sure that you know what the shipping is. If you don't then you will need to wait on the seller to contact you or you can send them an email requesting a total.

The goal here is to get your auction paid for as quickly as possible and have the item shipped to you. Remember to stay in close contact with the seller. Don't be discouraged if you don't get the kind of contact you want. Some people are just not that good at customer service and don't take care of the details.

If your seller has good feedback then you WILL get your item. If you have a problem then email him/her and try to work it out. When all is done make sure to leave them positive feedback and ask them to do the same for you.

## WHERE TO BUY CHEAP PS2 GAMES

Even if you fixed your PS2 by one of the techniques in my guide you can benefit from Buying and Selling on [Ebay](#). It is a great place to sell your unwanted games and to pick up new games as a great price. Just follow the steps I described above for buying and selling your console and do it for games. You can't get them cheaper anywhere.

### CONCLUSION

Hopefully you have been able to get your problem resolved one way or the other. If my guide helped you I would really appreciate hearing from you and getting a testimonial. Please send me an email to [marke60@powerfulguides.com](mailto:marke60@powerfulguides.com).

If you have friends or family that you think would be interested in this guide then be sure to refer them to our website, but signup as an affiliate first and earn some money for doing it! [Click Here](#) to go to the affiliate information page.

If you have any comments that you think would make this guide better I would appreciate hearing them. Please send an email to the same address as above. I look forward to hearing from you.

Mark Eastman  
Powerful Guides  
[www.powerfulguides.com](http://www.powerfulguides.com)