

Toshiba DVD/VCR Model DVR620KU - Mode Switch Fix

Other Keywords – problem ejecting tapes; DVR ejects tapes; eating tapes; clean mode switch; DVR620KU teardown; DVR620 teardown.

My VCR, Toshiba DVD/VCR Model DVR620KU built in July 2009, was not winding up the loose tape before ejecting the cassette, so when I took out the tape cassette some tape was left in the VCR. I would have to take off the top of the VCR and loosen the tape from around the loading pins and then take the cartridge out and rewind the extra tape manually into the cassette. I determined the problem was probably the mode switch. I found a video on youtube which showed how to tear down the unit, clean the switch, and rebuild the unit. The video is at <https://www.youtube.com/watch?v=eQ0I2GPxlaw>, and was created by [12voltvids](#) .

The video which showed the whole procedure took about 51 minutes since he just left the camera running. However, he did some things not seen by the camera and it was not obvious where some screws were. I followed that video, documented my process with pictures, with indications of the location of the screws, and other thoughts. That is what is below.

SAFETY –

Always be aware of safety. Keep the unit unplugged while working on it. Keep it, and any parts taken out, away from children. It helps to work in a well-lighted area. Be aware that some things you do may create a fire hazard, for example loosening the power cord from the power board, or breaking a ribbon cable. This description is for folks used to working with electronics and I take no responsibility for any outcomes, or problems that you might cause by doing this work or following this description.

Hint: When you take out the screws for a step put them in a red plastic cup. Then put an empty cup on top and when doing the next step put those screws in that cup, etc. At the end you will have all the screws sorted and in the order in which to re-install them. Also, if the cup stack tips over, the screws will probably not fly around and be hard to find.

Step 1 – Take off the top of the VCR

To take off the top there are 5 screws, 2 on each side and 1 in the middle of the back see Figs. 1 & 2.



Fig. 1 – side screws



Fig. 2 – top back screw

Step 2 - Take off front panel. There are 3 clips on top, 3 on the bottom, 1 on each side, and 1 screw. Take out screw and pry up clips over projections. Remember the clips on the sides. See figures 3 & 4.



Fig. 3 – Take out screw

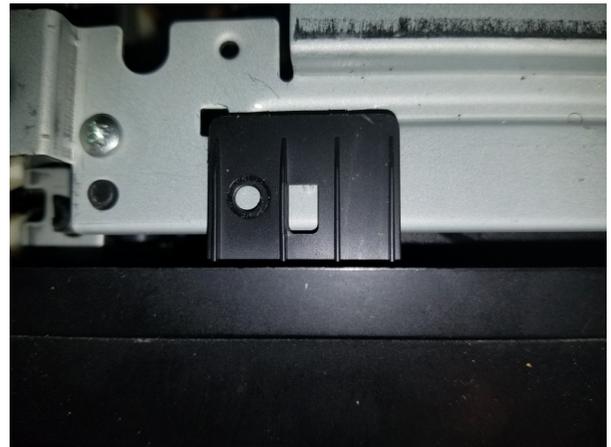


Fig 4 – Pry up 8 clips

Step 3 – Pull ribbon cable from front panel gently. The ribbon cable just pulls out of the socket. Don't try to pull the socket from the circuit board (see Fig 5). Put front aside.



Fig. 5 – Slide out ribbon cable from front panel

Step 4 – Take off the top front bar.

Take out 3 screws. Mark the middle screw because it is bigger than the side screws.

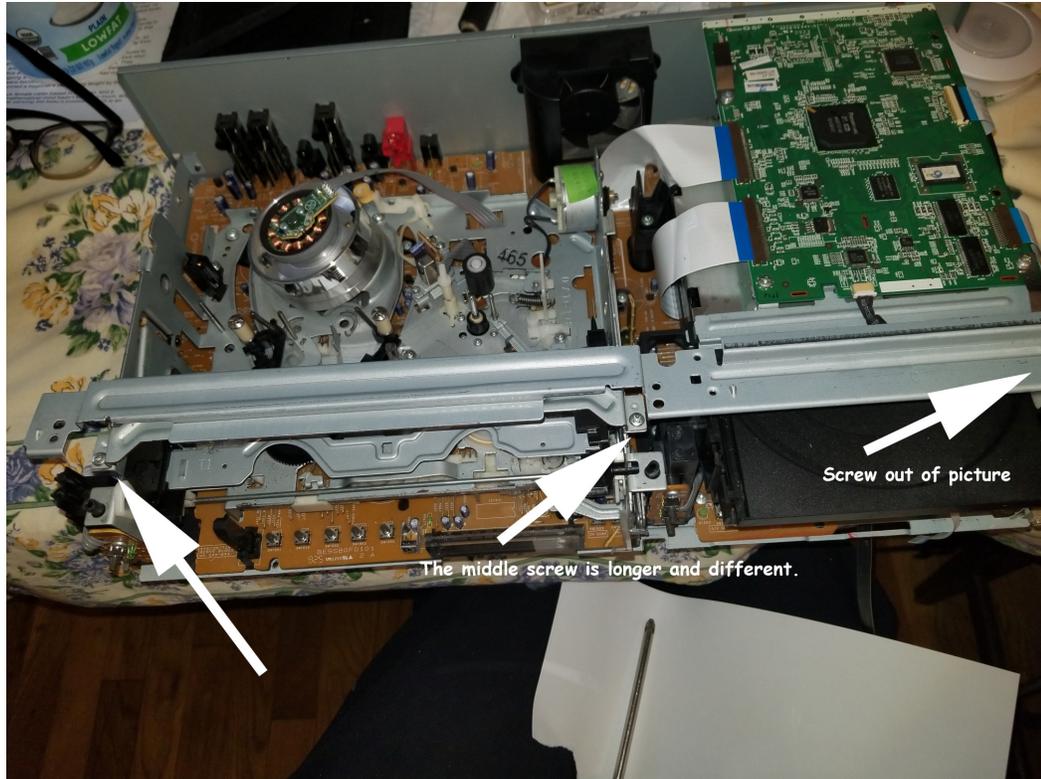


Fig. 6 – Take off front bar, 3 screws

Step 5 – Unplug ribbon cables from sockets on circuit board of DVD player. Pull gently and they will slide out of their sockets. Don't pull on sockets. They do not flip up. See Fig. 7.

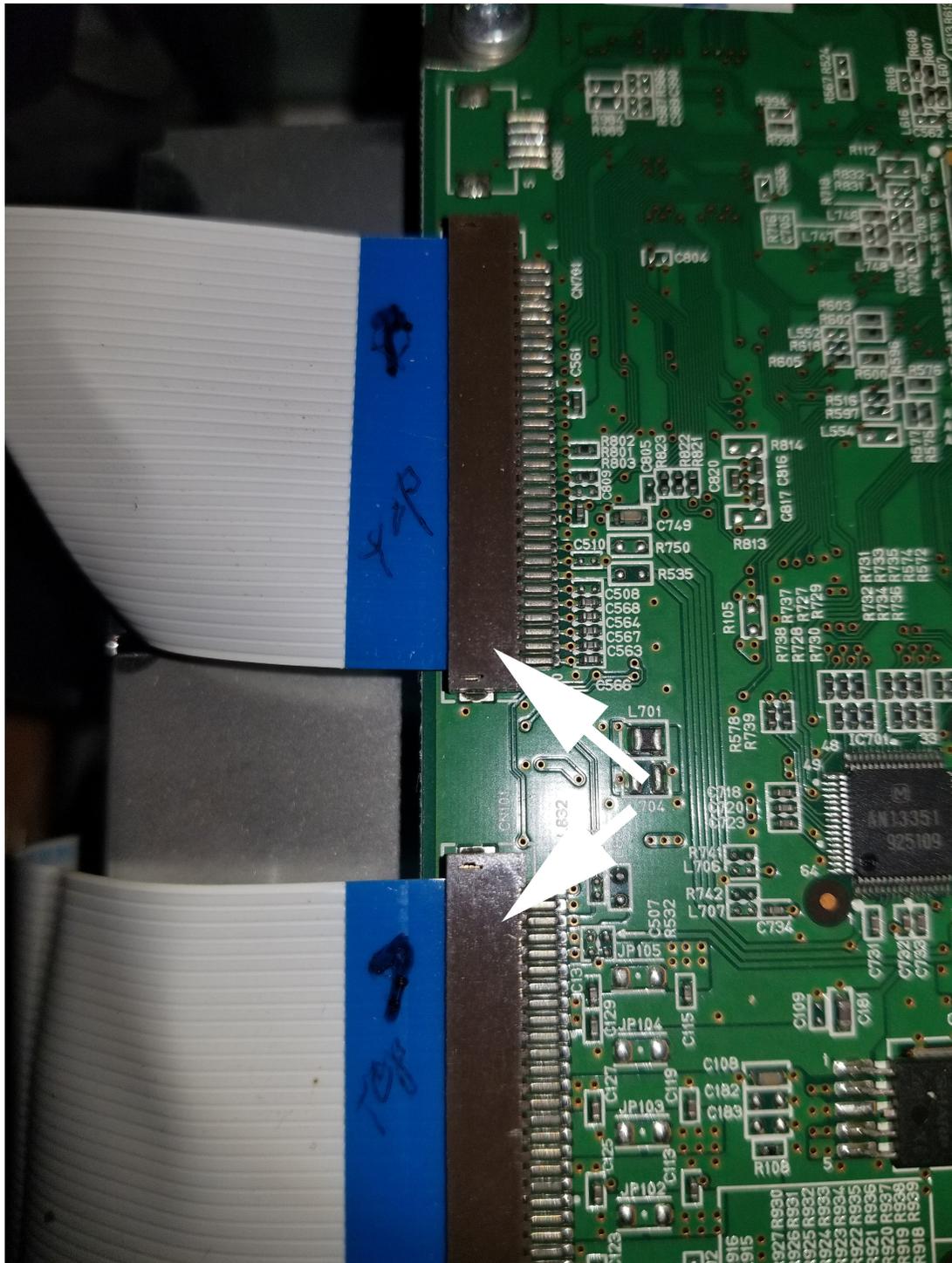


Fig. 7 – Slide ribbon cables from DVD player

Step 6 – Unscrew DVD player from the framework. Do this by unscrewing 4 screws holding the player to the framework (Fig. 8). Unscrew one screw under the HDMI port on the back (Fig. 9). Don't unscrew the screws holding the circuit board to the DVD player frame.

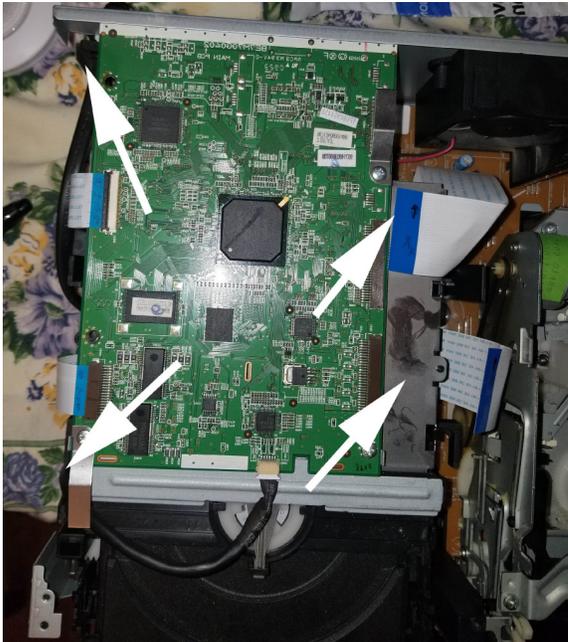


Fig. 8 – 4 screws

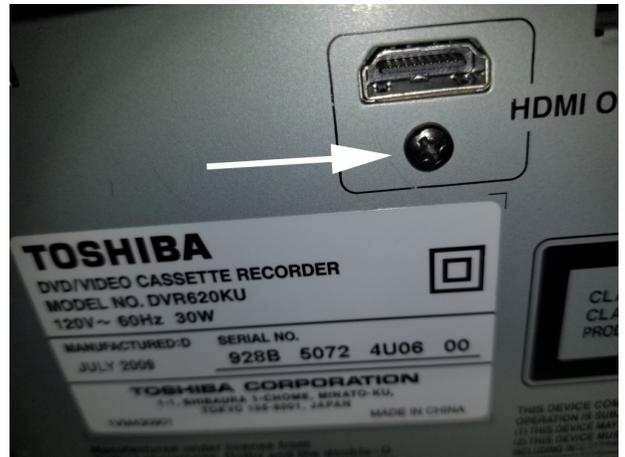


Fig. 9 – 5th screw under hdmi port

Step 7 – Unplug tube from front of DVD unit
Gently pull the wire in the tube from the front of the DVD circuit board (see Fig. 10). Take out DVD unit and put aside.

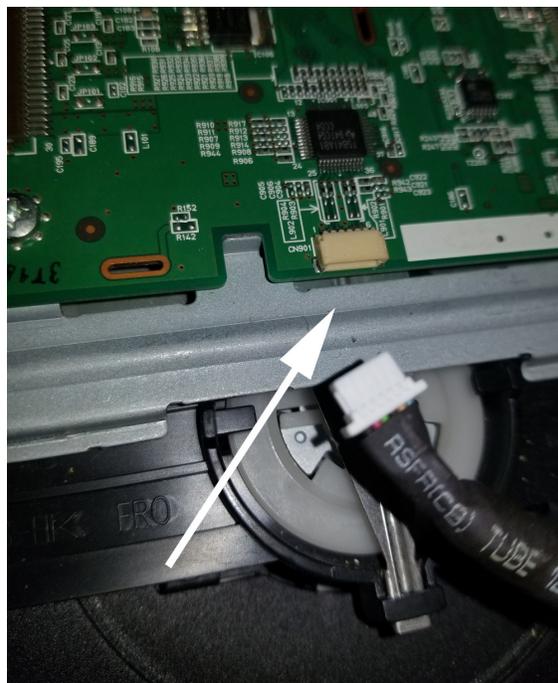


Fig. 10 – Gently pull tube from circuit Board

Step 8 – Slide power cord out from back panel

Slide the power cord from the back panel but don't let it pull on the connections where it is soldered to the power board.



Fig. 11 – Slide power cord out of back panel

Step 9 – Carefully take out the power ribbon cable from the circuit board

Take out the ribbon cable going from the power board to the circuit board on the circuit board side. The ribbon cable slides out. I didn't get a picture of the power board so figures 12 and 13 are from a different unit but the layout is the same.



Fig. 12 – Slip out ribbon cable from circuit board

Step 10 – Take out 4 screws holding the power board support framework (dark brown) to the case. Do not take out the screws holding the circuit board to the dark brown framework. One of the 4 is under the ribbon cable and one is in the top right corner which is hard to see.

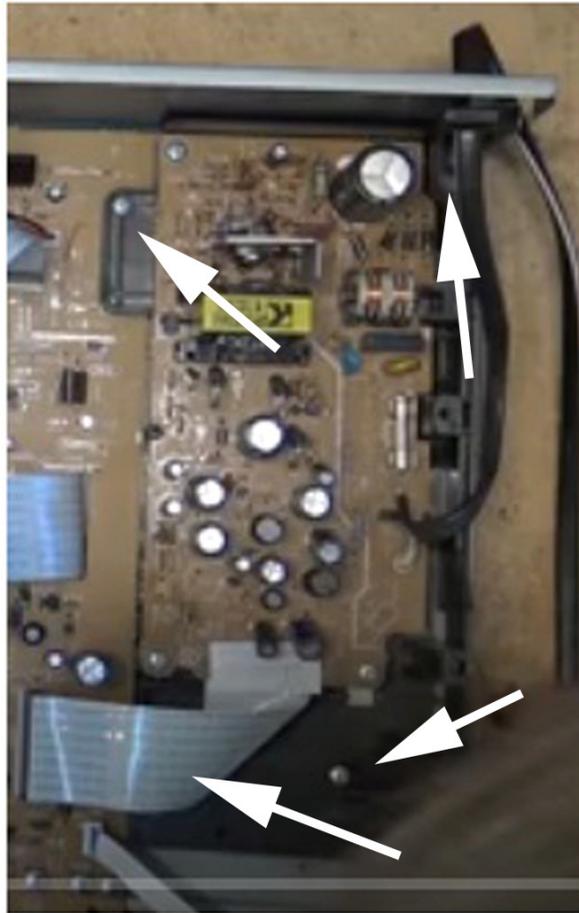


Fig. 13 – Take out 4 screws holding power framework to case

Step 11 – Take off the back panel

To take off the back panel you need to take out 6 long screws which hold the plugs in the back to the panel (see Fig. 14). I also took out 3 screws for the fan but I don't think the fan has to come off the back. Then take out 3 screws holding the back to the bottom of the case. These are shown in Fig. 15.



Fig. 14 – Back panel showing 9 screws



Fig. 15 – Three screws to remove to separate back from bottom case

Step 12 – Unplug the fan from the circuit board

Fig. 16 shows the wires from the fan (looking from the back) which should be unplugged before the panel can be completely removed. I found this hard to unplug. The bottom of the connection is wired to the circuit board and the top piece pulls out. Fig. 17 shows the plug when apart.

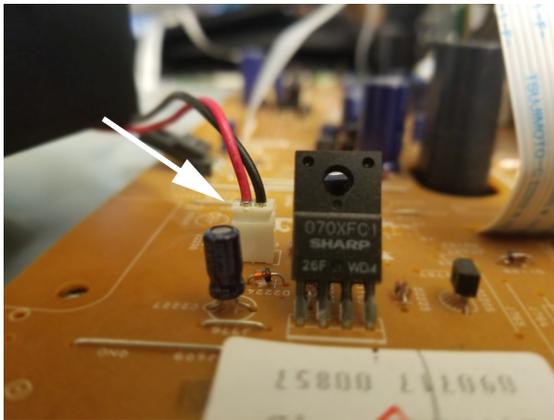


Fig. 16 – Unplug fan from circuit board

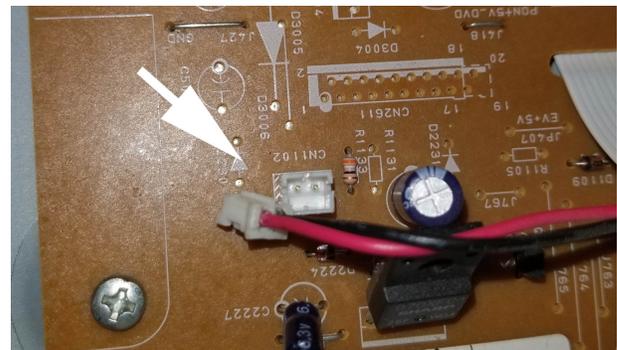


Fig. 17 – Fan plug apart

Step 13 – At this point we are getting close. We just have to separate the unit of the VHS deck connected to the circuit board, from the bottom of the case, so we can get to the bottom of the circuit board. To do this we must take out 4 screws attaching the circuit board and VHS deck unit to the dark brown frame and one screw attaching the circuit board to the case. Two of the screws are not shown in Fig. 18 (apologies) but you can find them. Note: in the figure the back is still on but it was the best picture to show location of screws.

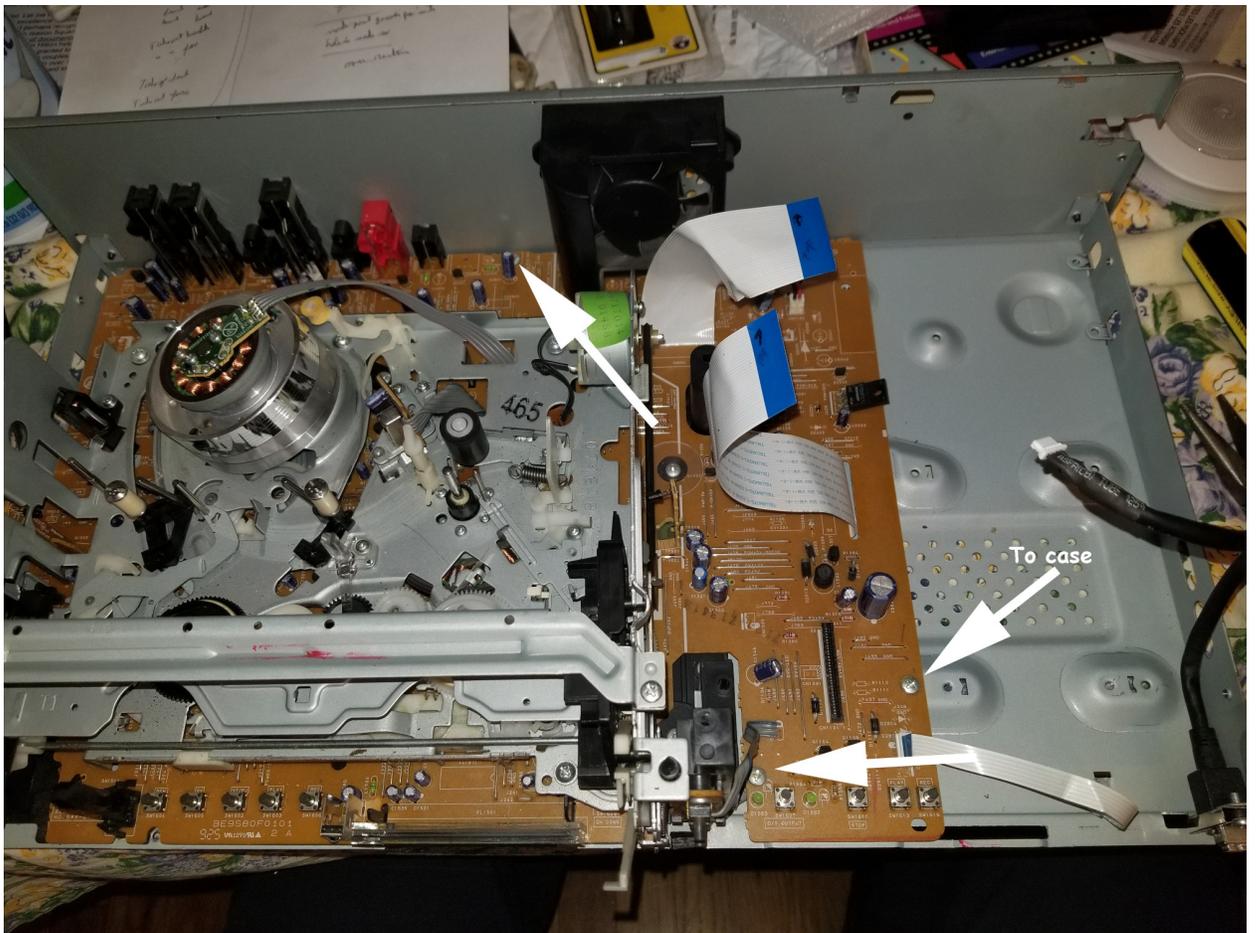


Fig. 18 – Showing 3 of 5 screws to take out

Step 14 – Take out screw with plastic circle
Take out this screw which holds circuit board to case.

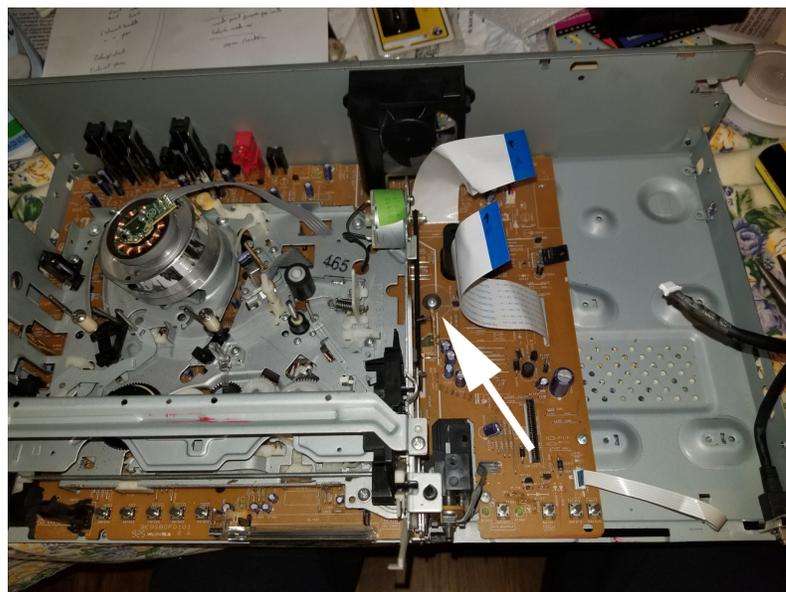


Fig. 19 – Take out screw with plastic circle

Step 15 – Take VCR/circuit board unit out of case

You should now be able to take the circuit board with the VCR attached away from the case bottom which still holds the dark brown framework. The bottom of the case is shown in Fig. 20 and it can be set aside.



Fig. 20 – Case bottom and framework after circuit board/VCR removed

Step 16 – Remove screws holding circuit boards on each side of VCR

Take out screws holding the circuit boards at each side of the VCR unit as shown in Figs. 21 and 22. In the figures the screws have already been taken out.



Fig. 21 – Left hand side board.



Fig. 22 – Right hand board.

Step 17 – Take out 5 screws holding VCR player to the circuit board.

We are now working with the circuit board and VCR player unit and the goal is to separate them just enough to get to the mode switch. The first step is to remove the 5 screws holding the VCR unit to the circuit board. Unfortunately, I forgot to take a picture of that but you can get an idea of where they are from Fig. 23 taken earlier. One of the screws is hiding behind the tape read head just under the tape cleaning wheel. Only 4 of the 5 are shown. Look for the 5th in the lower left corner. The picture also gives an overview picture of where to find the mode switch.

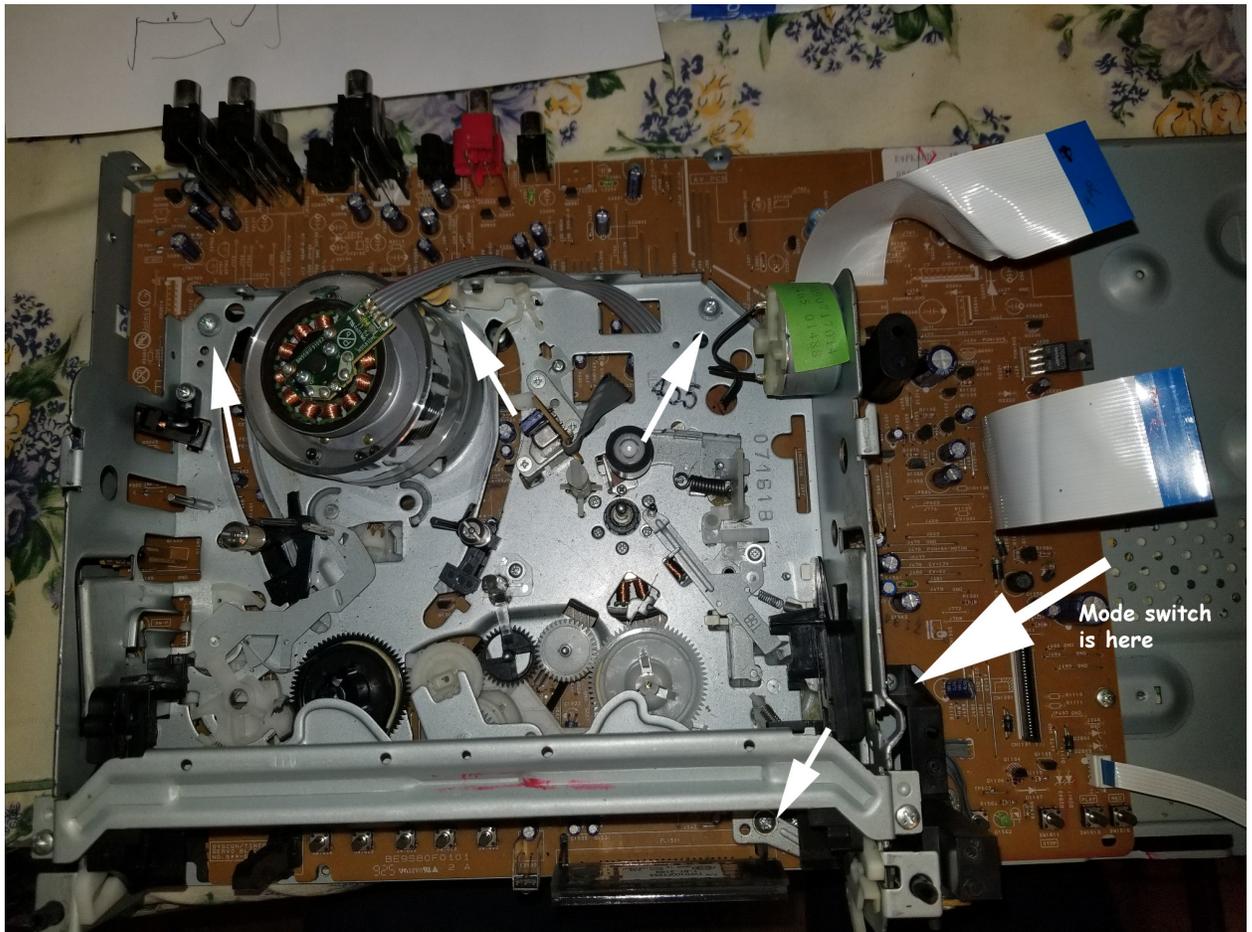


Fig. 23 – Location of 4 of 5 screws to separate VCR from circuit board

Step 18 – Unscrew 2 screws on back of circuit board connected to the VCR

The next step is why we have done all the previous work. We want to separate the VCR from the circuit board **just enough** to get at the mode switch. To do this we have to get to the back of the circuit board and take out two screws see Fig. 24.

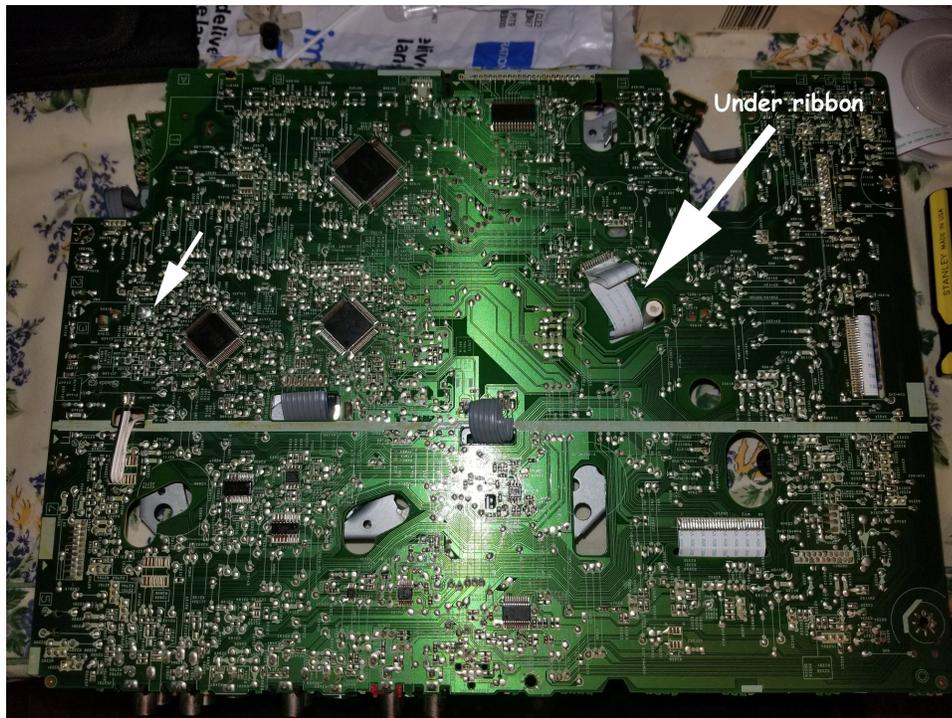


Fig. 24 – Unscrew two screws on back of circuit board

Step 19 – Turn unit over and pop out the mode switch

First turn the unit over carefully so the VCR does not separate from the circuit board. Then gently pull up on the front of the VCR unit so you can see the mode switch under the front right corner (see Fig. 25). You should be able to reach in with a finger or needle nose pliers and pop the switch up and pull it out. Now take some cleaner, I used DeoxIT (Fig. 26), and clean up the bottom of the switch which is on the circuit board. Then clean off the prongs on the piece you popped out being careful not to bend them (Figs. 27 & 28).

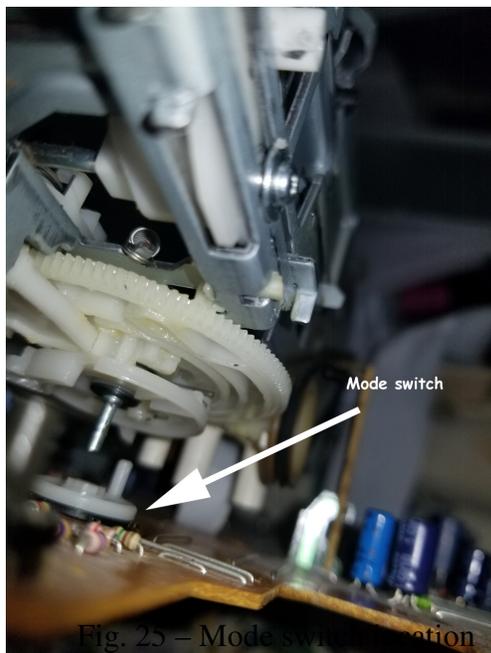


Fig. 25 – Mode switch



Fig. 26 - DeoxIT

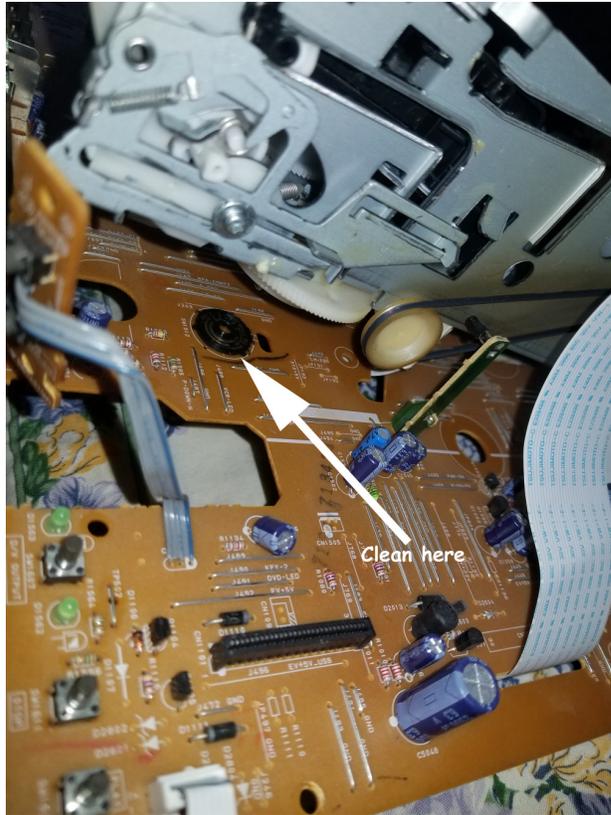


Fig. 27– Bottom of mode switch

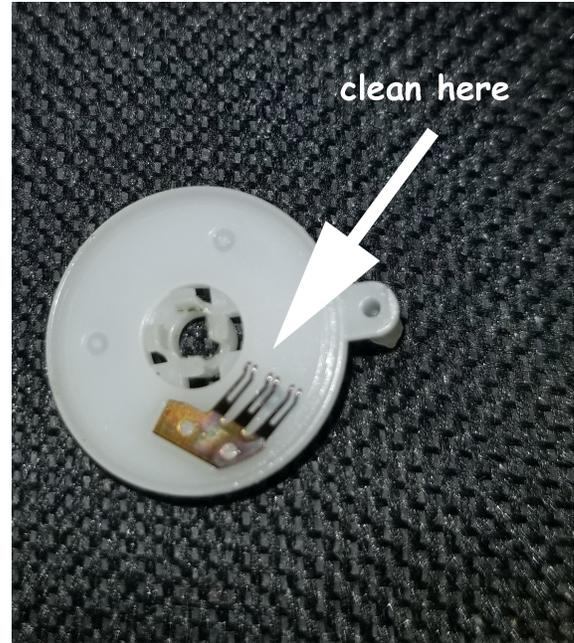


Fig. 28 – Bottom of top part of mode switch switch

Step 20 – Put mode switch back together

Now you have to put the mode switch back together precisely. First put the top part back on and rotate it a few times to make sure it is in the right spot. Leave the white column toward the back. Slowly lower the VCR unit back onto the mode switch top so the metal pin goes in the center hole and the white column goes into the hole in the gear above (see Fig. 29). This is tricky and takes good eyes and good light. The hole is in the white gear and is hard to make out. Don't force it and make sure the column is in the hole in the gear and not beside it.

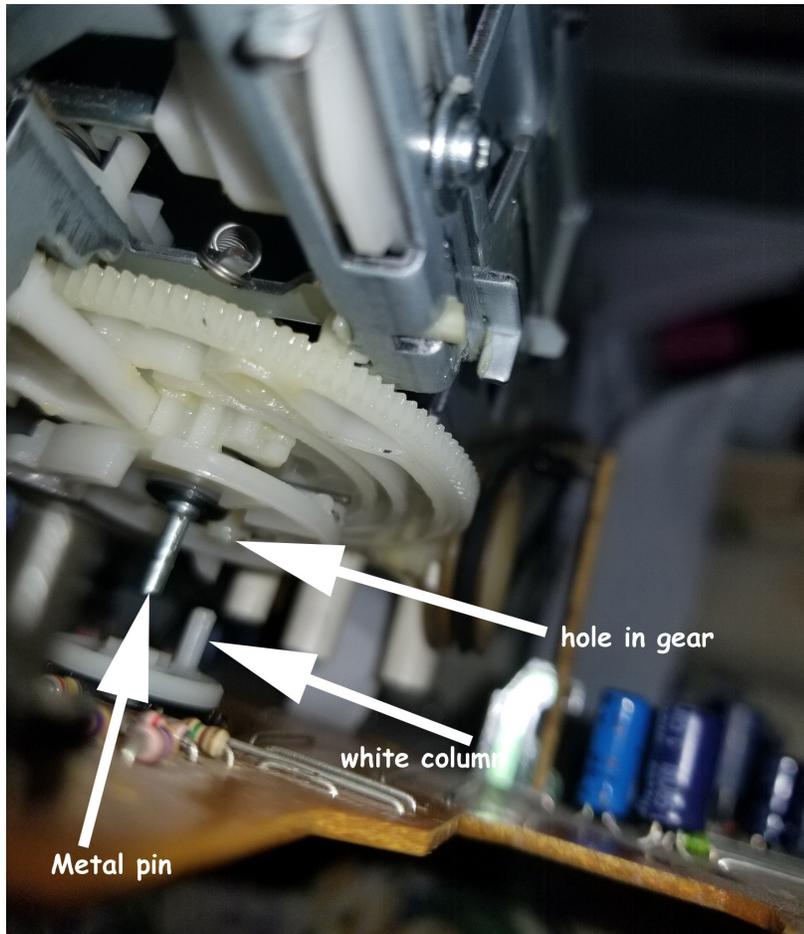


Fig. 29 – Put mode switch back together

Step 21 – Reverse the previous steps and put the player back together

Now reverse the steps and put the payer back together. I have added some paragraphs to help you where I had trouble.

I had trouble putting the fan connector back together. It has to be directly over the pins before it can go in. Don't bend the pins. Make sure the red wire is on the right as you look at it from the front (see Fig. 16).

The two circuit boards on the front of the VCR unit must be vertical to be screwed in properly (see Figs. 20 & 21).

Be careful replacing the ribbon cables that the pins don't get bent. I had trouble with the ribbon cable to the DVD player closest to the front. I had put the other ribbon cable in first and couldn't get my fingers in position to put the second cable on. Finally, I took out the cable in back and put the front cable in first, while I could get a grip on it. Then I put the rear cable in second.

Remember, when replacing the bar across the front, the middle screw is different than the two side screws (see Fig. 6).