



**DVRupgrade® Kit
Installation Instructions
Hughes HR10-250 HDTV TiVo with DirecTV
Add-On Drive Kit**

Note: Read all instructions first! Do not place your unit or its components on a carpeted floor while open. The internals of your unit contain sensitive electronic components that can be damaged by static electricity. Under no circumstances should you touch any component of the unit's power supply, even if the unit is unplugged; it may shock you. The drives included with your kit are pre-configured and jumpers are already set appropriately. DO NOT CHANGE JUMPER SETTINGS ON ANY DRIVE WE SUPPLY WITHOUT CONTACTING PTVupgrade FIRST!

Step 1 Using the supplied Torx driver, remove the five screws on the rear of the unit securing the cover.



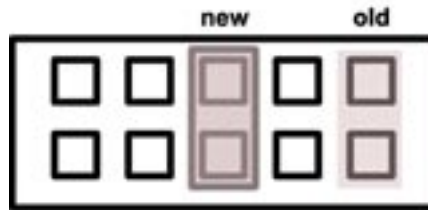
Step 2 Gently remove the cover by sliding back and lifting from the top rear. Put cover and screws in a safe place while performing your upgrade.

Step 3 Visually inspect internals of unit. Note the power supply shown in the upper right hand corner of the illustration. Please avoid touching this, even while unit is unplugged. Note the "OTA tuners" shown in the bottom center of the unit - do not touch the white cable passing above them, it is very delicate. And note the "A" drive or "system" drive in the lower right hand corner.



Step 4 Disconnect the IDE CABLE (this is the flat "ribbon" cable attached to the disk drive and the system board) from both the disk drive and the system board. Also remove the POWER CABLE from the disk drive, it has the white connector with four wires (black, red, and yellow) connected to it. Do not pull on the wires, only on the connector which may be tight; gently wiggle it until it comes free - do not pry with tools. Be patient while doing this.

Step 5 Now look at the rear of the disk drive, and you will see two rows of pins and two of these pins will be connected by a black or white "jumper" -- normally, these pins will be covering the upper right, and lower right "pins" (see diagram below) - use a toothpick or tweezers to remove the jumper and move it to the center pins, as shown. If it is absolutely necessary, you may remove the drive using the supplied Torx driver and loosening the two screws on the edge of the disk drive mounting bracket. We would prefer that you not remove the drive if at all possible.



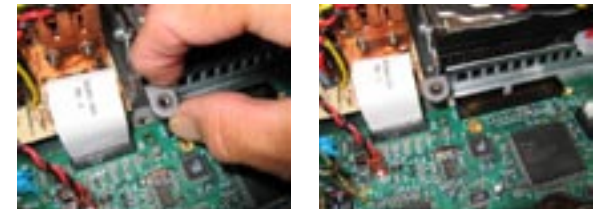
Step 6 Unpack and inspect all of the components in the Series2 add-on drive kit. If the photo below is not clear, check out <http://www.9thtee.com/TiVoMtgBracket-hd.htm> for a clearer version.



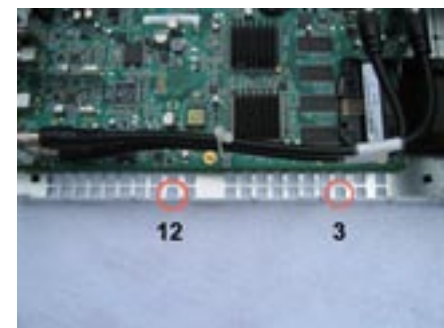
Step 7 The following photo illustrates the bottom of the HR10-250, and the circle in the center depicts the location you will place one of the 1/4" long screws through the base, along with one washer, and affix the first C-clip standoff.



The photo below illustrates proper placement of the first C-clip. Use the previous photo to aid in location of the screw from beneath. The second photo below depicts the standoff when fully installed. Note that the C-clip edge is placed beneath the system board, and not on top of it.

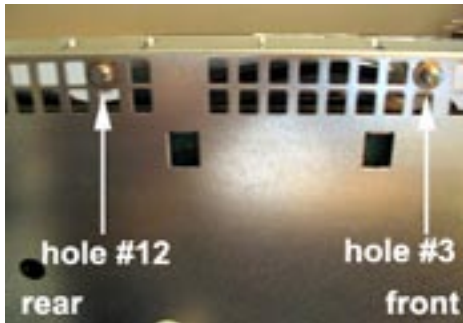


Step 8 Now locate square holes #3 and #12 on the outer edge of the side of your unit. These holes will also be used for the C-clip standoffs.



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Step 9 Now install the two remaining C-clips using 1/4" screws and washers in the locations of holes #3 and #12 as shown below.



Step 10 Press the plastic clip that holds the two cables together over towards the left. It may help to first untwist the clip, push it over, and then twist it back closed. Alternatively, you can remove the clip without damaging it by using a needle-nosed pliers and squeezing the clip from beneath to release it from the chassis.



Bracket and Drive Sub-Assembly

Step 11 Next, install the linkage arm to the mounting plate. Put a 1/2" long screw through the mounting plate and then through the round hole in the linkage arm. The linkage arm is located *beneath* the mounting plate and is attached to either of the small holes located on the corner of the mounting plate.



Step 12 Locate and thread the locknut on the 1/2" long screw. Use a wrench or pliers to tighten the linkage arm in a position approximate to what is shown below.



Step 13 Now lay the assembled mounting plate and linkage arm on the C-clips to ensure the holes in the C-clips in the TiVo line up properly with the holes in the plate. If they do not line up perfectly, you can loosen the C-clips from the bottom and slide them around until things line up. You can also adjust the angle of the linkage arm and re-tighten, accordingly.



Step 14 Install the blue grommets in the mounting plate. If you have difficulty inserting the grommets, use the tip of a small screwdriver to work them into the holes. Position the hard drive as shown and line up the grommets with the screw holes in the hard drive. Note that the IDE and power connector on the hard drive below are to the left/top of the illustration.



Step 15 Line up the center of the grommets with the screw holes on the hard drive. Then put a metal spacer in each of the grommet's centers. Next, use a 1/2" screw and a plastic washer to secure the plate to the hard drive. Secure the screws tightly.





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Final Assembly

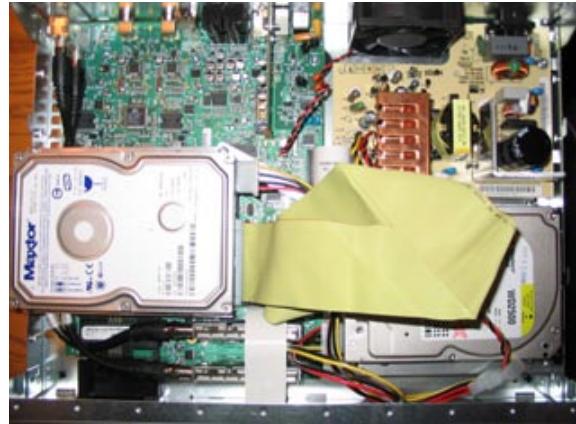
Step 16 Gently depress the two OTA cables and keep the plastic clip which previously supported them to the side. Line up the drive bracket assembly with the holes in the C-clips and secure the assembly using 1/4" long screws.



Step 17 Use a 1/4" long screw to secure the linkage arm to the remaining C-clip. Now fully tighten all screws on the drive assembly.



Step 18 Carefully connect the "Y" power connector to the system power plug, and then connect each drive to the power connector. Then attach the blue connector of the IDE disk drive cable to the TiVo system board, and connect the remaining two connectors to the drives. It does not matter which of the connectors attaches to each drive as long as the blue connector is attached to the system-board. You will need to gently fold the IDE cable so that it can be connected; try not to pinch or crimp it, its just a matter of folding things in an organized fashion.



Step 19 Double check all of your connections and ensure all drives are mounted securely in the appropriate places. You can test out your unit with the cover off, as long as you are careful not to touch anything! If your unit does not boot, chances are you did not connect the drives properly, or you changed the jumpers to the wrong settings - go back and check the instructions again before going any further!

Once your unit is booted, you can go to your *System Information* screen under *Program Guide and Setup* to verify that your additional capacity has been recognized.

When you are ready, carefully replace the cover of your unit.

If you have any trouble at all, you can contact our support by sending email to support@ptvupgrade.com and you can also use our free forums at <http://forum.ptvupgrade.com>