

# TIVO UPGRADE INSTRUCTIONS

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Instructions for add drive upgrade for Hughes GXCEBOT

## A FEW WORDS OF CAUTION:

**First and foremost, please be aware that upgrading a TiVo presents a few physical hazards. As with most consumer electronics devices, components in the TiVo may still carry a lethal charge, even after disconnecting from your power supply. Be aware of this while working inside your TiVo. Allow sufficient time for discharging of components and avoid contact as much as possible with potential hazards. While we have done everything we can to provide accurate, easy-to-follow instructions, we cannot be responsible for any damage done to your TiVo or to yourself as a result of your upgrade. By opening your TiVo, you agree that neither Adberg Consulting LLC nor any of its members or affiliates is responsible in any way for any harm done. Please be VERY careful when upgrading. NEVER open the TiVo while the unit is plugged in and NEVER operate the TiVo if the lid is not securely fastened.**

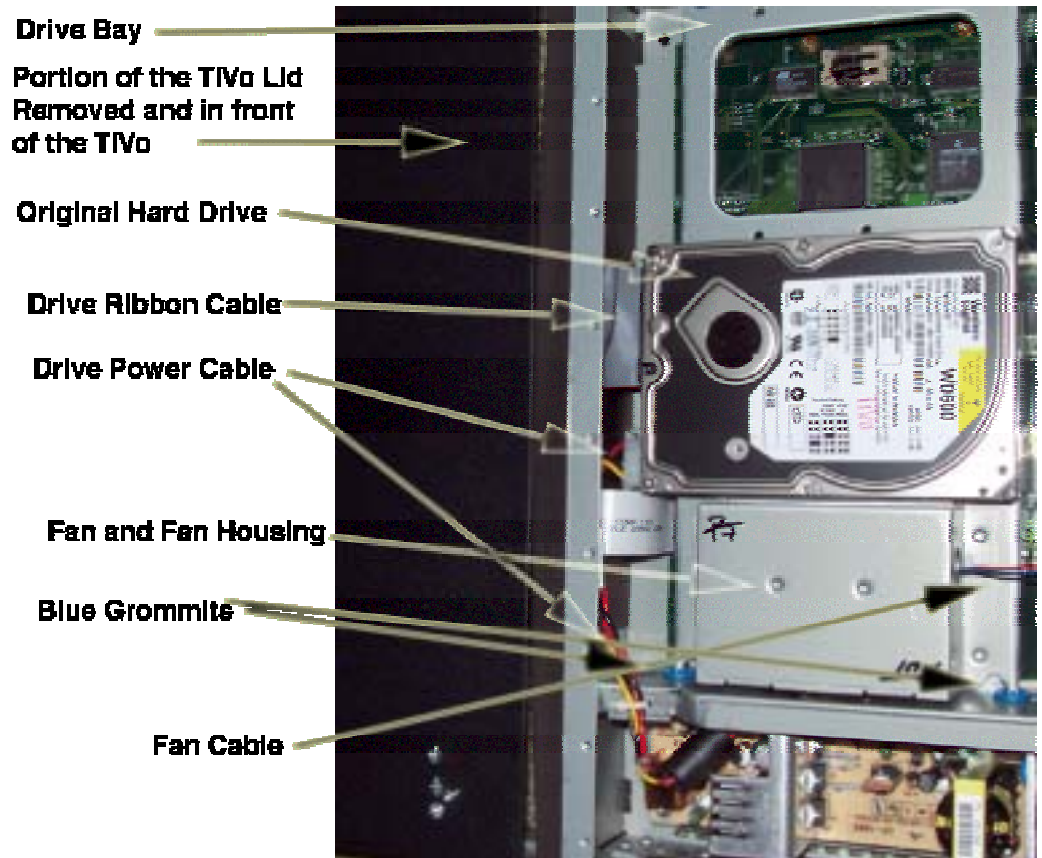
**Please Note: Opening the TiVo voids the warranty.**

## 1. OPENING THE TIVO

1.1. Unplug the power cord from the TiVo and wait five minutes for the TiVo to discharge. Do not plug the TiVo back in until you are completely finished. Be very careful of static electricity, which can destroy your TiVo's internal parts. You shouldn't perform this upgrade on carpet.

1.2. Unscrew the four Torx screws on the back of your TiVo using the smaller Torx screwdriver included with your Weakknees.com kit. The four screws are surrounded by black from the top of the TiVo's case (there are four other screw which you should NOT remove).

1.3. Once the four screws are removed, you have to remove the lid, which can sometimes be difficult. The "tried and true" method is to place the TiVo on the floor and kneel down with your knees about 6 inches from the FRONT of the TiVo. Place your palms on the top side edges of the TiVo, toward the back and push toward the back of the TiVo (this occasionally requires a bit of force). The cover should slide back and then up. Remove the cover from the TiVo.



## 2. DISCONNECTING THE DRIVE BAY

2.1. With the cover off and looking underneath the front lip of the TiVo, you will be able to see (1) one hard drive, (2) a ribbon cable that runs from the greenish motherboard underneath the drive to the hard drive, (3) a multi-colored (red, black, yellow) power cable that runs from the power supply to the hard drive, and (4) a fan cable (two-wires; red/blue) that runs from the hard drive bay to the motherboard.

2.2. Place the TiVo lid upright in front of the TiVo, forming a platform that will be used to support the drive bay after you remove it.

2.3. Gently remove the fan cable from the motherboard. Pull straight up and out.

2.4. Using your larger Torx screwdriver, unscrew and remove the two screws on the left-hand side of the drive bay (as you are looking at the front of the TiVo). Also remove the gold inserts from the blue grommets and keep the two screws inside the gold-colored inserts.

2.5. Once the screws and inserts are removed, you will be able to lift the drive bay up from the left side and slide it out of the two holes on the right side of the drive

bay. As you slide the drive bay up and out of the holes, watch the drive cable and power cable that are connected to the drive. Flip the drive bay up and out of the TiVo and onto the TiVo lid, with the hard drive face-down on the TiVo lid and the two cables running from the drive to the TiVo. You will now need to remove both of the cables connected to the hard drive by following the instructions below:

(a) The hard drive has a power connector running into the hard drive. The power cable has a white connector plugged into the hard drive. Remove the power connector from the hard drive. The power cables are sometimes difficult to remove; patience and wiggling it back and forth usually does the trick.

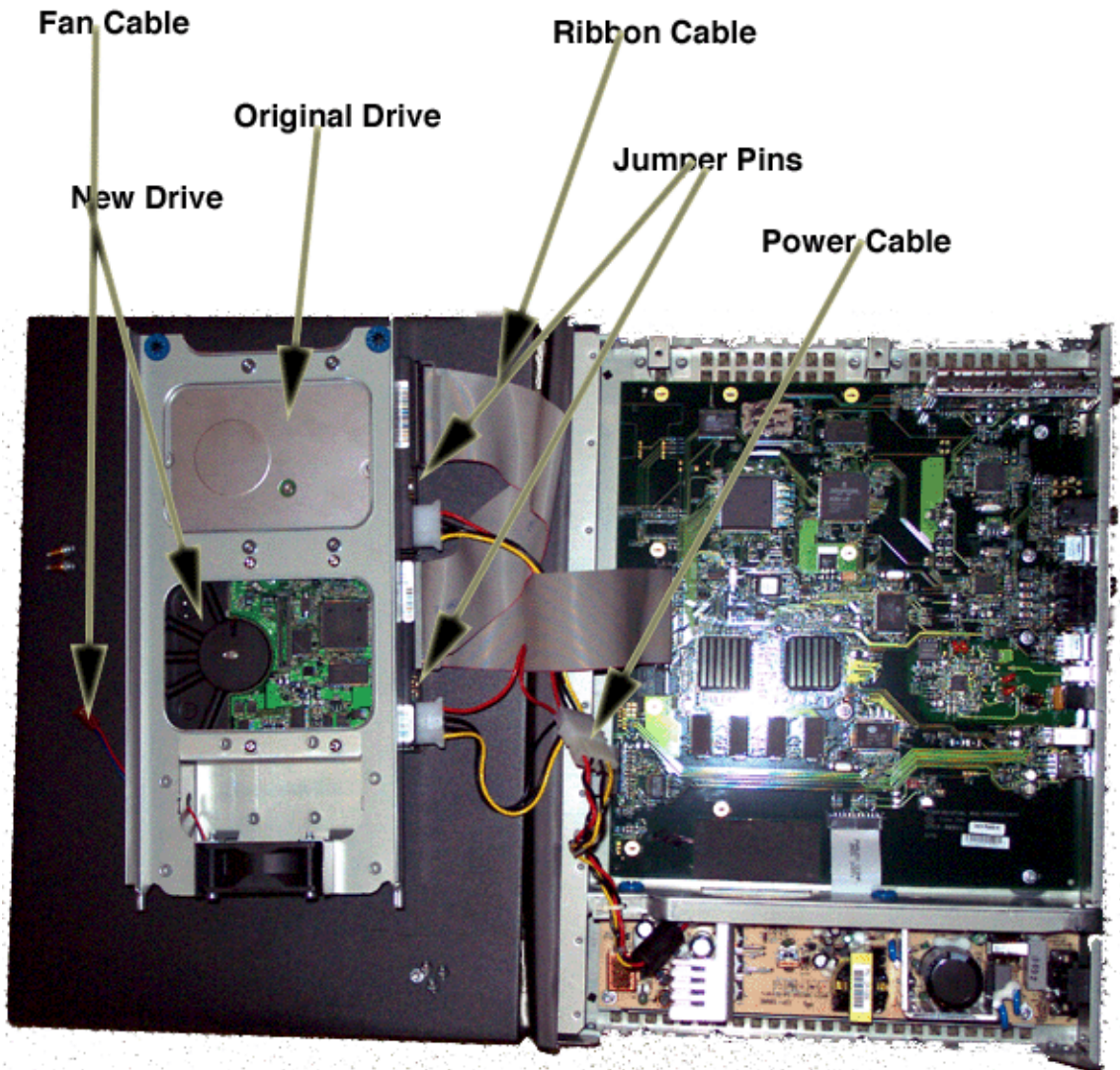
(b) Remove the hard drive ribbon cable (longer, gray cable with a blue or black connector) from the hard drive by pulling on the hard plastic piece connected to the hard drive.

### **3. FIXING THE JUMPER**

Pick up the hard drive bay and look at the hard drive with the label facing up and the empty power/IDE cable connectors facing you. Your TiVo's hard drive has a small white plastic "jumper" that is located between the IDE cable and the power cable connectors.

You will notice a total of four pairs of pins (and, therefore, 4 possible places for the jumper). Ignore the single pin located closest to the IDE cable.

In a Maxtor or Quantum hard drive, the jumper should be moved to the furthest left-hand position (again, ignoring the single pin). Gently remove the jumper with the end of a paper clip or your fingernail and move it to the proper position. NOTE: the jumper must be vertical and must be carefully inserted so that the jumper fits inside the left-hand most pins.



#### 4. MOVING THE EXISTING DRIVE

4.1. After you have moved the jumper to the proper setting, place the hard drive bay upside-down on the TiVo lid, with the drive label down and the drive connectors facing the front of the TiVo.

4.2. With the hard drive bay upside down on the TiVo lid, use your larger Torx screwdriver and remove the four screws connecting the hard drive to the hard drive bay. Do not confuse these screws with the four screws you removed from the back of the TiVo before removing the lid.

4.3. Slide the hard drive that you just unscrewed to the end of the hard drive bay, being sure that four screwholes in the drive are aligned with the four previously unused holes in the drive bay. Reconnect the hard drive to the drive bay using the four screws that you just removed. We have found that the easiest way to attach the drive to

the bracket is to turn the bracket upside down. Using one hand, hold the drive against the bottom of the bracket and look through the holes in the drive bay to align the screw holes. Using your hands, screw the screws into each of the four holes. Tighten them with the Torx screwdriver bit that was included with your kit.

## **5. CONNECTING THE NEW HARD DRIVE TO THE DRIVE BAY**

5.1. Included in your upgrade kit is a hard drive and a bag of screws. Align the hard drive on the drive bay, next to the existing hard drive (between the original drive and the fan, where the existing hard drive *was* located). Using the screws included in your kit, attach the drive to the bracket by following the instructions below:

(a) We have found that the easiest way to attach the drive to the bracket is to turn the bracket upside down. Using one hand, hold the drive against the bottom of the bracket and look through the holes in the drive bay to align the screw holes. Using your hands, screw the screws into each of the four holes. Use a Phillips-head screwdriver to tighten the screws.

(b) NOTE: Check to be sure that the drive is attached so that the drive connectors face the same way as the existing drive.

5.2. You should now have two drives connected to the drive bay.

## **6. REPLACING THE POWER CABLE AND IDE CABLE**

6.1. Your upgrade kit contains two cables. The first is a multi-color (black, red, yellow) power splitter cable. The second is a hard drive IDE cable. You will first need to ADD the power cable to the end of the existing TiVo power cable and REMOVE the current hard drive cable from the TiVo.

(a) Carefully remove the gray ribbon cable from the TiVo's motherboard and set it aside. Pull straight up from the black plastic piece attached to the motherboard. Be very careful with static and do not touch the motherboard itself. You will not need the cable anymore.

(b) Take the red/yellow/black power splitter cable included with your upgrade kit and connect the male end (the only end that will fit) into the power cable that you removed from the original hard drive.

6.2. Install the hard drive cable that was included in your upgrade kit onto the motherboard using the blue connector. You will notice a slight groove in one side of the plastic connector. That small groove aligns with the groove on the motherboard socket.

6.3. Once you have connected both the power cable and the hard drive cable, you should have a long hard drive cable and a long power cable hanging out of your TiVo.

## 7. CONNECTING THE POWER AND HARD DRIVE CABLES TO THE DRIVES

7.1. If you have the floor/table space, move to the back of your TiVo so that you are looking at the back of the two hard drives.

7.2. Connect the two power cords to the two drives, being sure to align the power connectors properly (rounded side down). Be sure that the power connectors are securely fastened.

7.3. Connect the hard drive cable to each of the hard drives. The black connector plugs into your TiVo's original drive. The middle (gray) connector plugs into your new drive. Again, be sure the cable is pushed snugly into the drive (it only fits one way). Be very careful not to bend any of the hard drive pins.

7.4. Now move back in front of your TiVo to re-attach the drive bay.

## 8. RE-ATTACHING THE DRIVE BAY

8.1. Once you have the cables connected to the drives, carefully flip the drive bay over.

8.2. You will need to insert the two pins on the right into the light blue grommets, while at the same time watching the power connectors and the gray hard drive cable. You will want to tuck the power cables down into the TiVo (in front of the hard drives). You will also want to tuck down the portion of the hard drive cable that is between the two drives. You will also want to watch the fan cable (the lone red/blue cable) to be sure that it hangs free.

8.3. A word about the extra cables: You will need to play with the excess cable to be sure that the excess cable is in front of or on top of the drives—and not below the drives. Ideally, you will have the excess gray cable folded on top of the drives and the power cable tucked in in front of the fan housing.

8.4. Once the two pins are in the blue grommets, align the left side of the drive bay so that it is directly over the screw holes on the left side of the TiVo.

8.5. Screw the two screws (and gold inserts) back into the holes on the left side of the drive bay using the Torx screwdriver bit.

**8.6. Insert the fan cable back into the motherboard. (This is easy to forget, which is why it is in bold!)**

## 9. RE-ATTACHING THE TIVO LID

9.1. Kneel down in front of your TiVo as you did when you removed the lid. Place the TiVo lid back over the TiVo. Align the clips on each side of the lid so that they clip down on the sides of your TiVo. Slide the lid toward you while simultaneously pushing down on the top of the lid.

9.2. Once the lid is in place, reattach the four Torx screws.

We thank you very much for your purchase and hope that you enjoy your newly-enhanced TiVo. Please [email us](#) with any comments, suggestions or complaints. If you found the upgrade easy to install (or even if you found it more difficult than you expected), we'd love to know. If you found our service to be excellent (or awful), we want to know that too. We're always looking to improve our products and services...the more we hear from you, the better. Thanks very much!