

TIVO UPGRADE INSTRUCTIONS (#25)

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Instructions for ADD AND DUAL DRIVE Series 2 (TCD140060, TCD130040 or HUGHES GXCEBOT) upgrade
These instructions are also available in color at <http://www.weaknees.com>

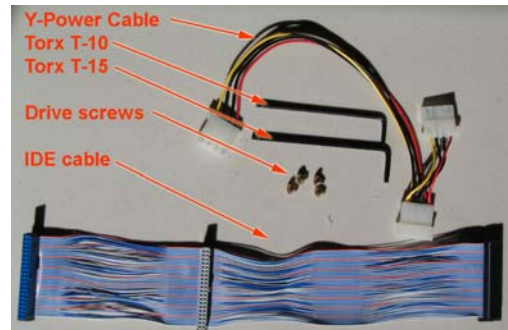
WORDS OF CAUTION:

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 nor any of its shareholders, 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.

THIS KIT INCLUDES:

- 1 T10 Torx L-Key
- 1 T15 Torx L-Key
- 4 Drive screws
- 1 IDE hard drive cable (actual cable may vary from picture)
- 1 Y-power splitter (appearance may vary from picture)
- 1 Upgrade hard drive (not shown) [ADD KITS ONLY]
- 1 Upgrade hard drives (not shown) [DUAL DRIVE KITS ONLY]
- 1 Set of upgrade instructions (not shown)

You will also need a Phillips-head screwdriver



1. OPENING THE TIVO

Unplug the power cord from your electrical outlet 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 should not perform this upgrade on carpet.

Using the Torx T10 (smaller of the two) L-key included with your kit, unscrew the four Torx screws on the back of your TiVo. The four screws are surrounded by black or gray from the top of the TiVo's case.

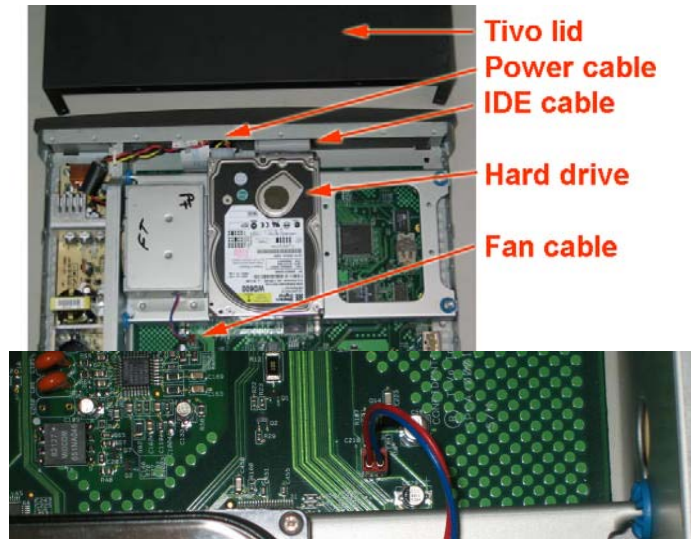


Once the four screws are removed, remove the lid. Place your palms on the top side edges of the TiVo, toward the back and push toward the back of the TiVo (this occasionally requires a bit of force). The cover should slide back and then up. Remove the cover from the TiVo. (Note to Hughes GXCEBOT owners: the front and back of your TiVo will look different from the one in the pictures, but the screws and lid removal are identical. The same is true for the remaining pictures.)



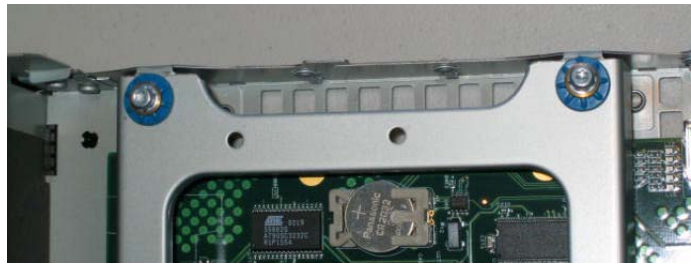
2. DISCONNECTING THE DRIVE BAY

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



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

Using your Torx T15 L-key (larger of the two, although either may work for these screws), 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. [In the picture at the right, the front of the TiVo is to the left.]



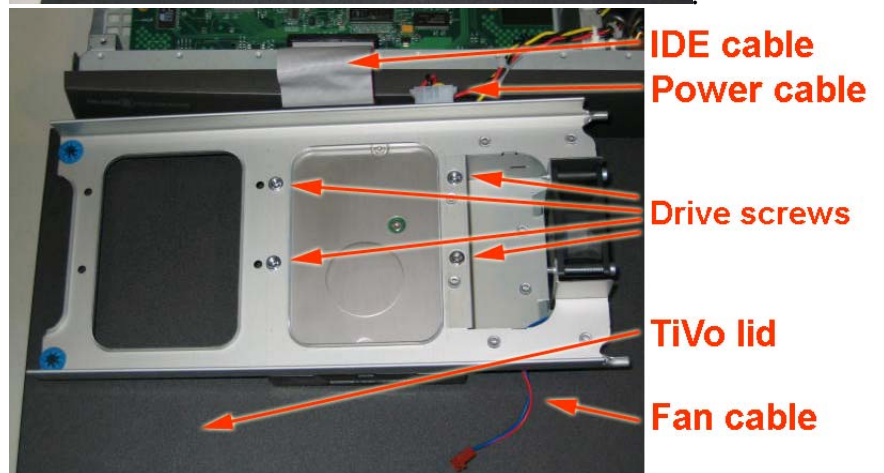
Once the screws and inserts are removed, you will be able to lift the drive bay up from the left side (as you are looking at the front of the TiVo) and slide it out of the two holes on the right side of the drive bay. As you slide the drive bay up and out of the TiVo, do two things simultaneously (1) support the right side of the bracket to prevent it from falling onto the motherboard as you pull it out of the holes, and (2) be mindful of the drive cable and power cable that are still 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:

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.

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 (ADD KITS ONLY)

You may need to set the jumper on the factory drive to “Master” (or in the case of Western Digital drives, “Master with Slave Present”). 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 one or two small white or black plastic “jumper(s)” that are located between the IDE cable and the power cable connectors. Confirm that the jumper position is correct. **DO NOT CHANGE THE JUMPER SETTINGS OF ANY DRIVE THAT YOU RECEIVED IN YOUR KIT.**

In a one-jumper Quantum or Maxtor 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. In a two-jumper Maxtor hard drive, the jumper should be set properly, and should be in the shape of an “L” turned 90 degrees clockwise.

If your TiVo’s original drive is a Quantum or Maxtor hard drive: If your drive has one jumper, then 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 connector. If your drive has two jumpers, then your drive has a total of 5 sets of two pins.

If your TiVo’s original drive is a Western Digital hard drive: You will notice a total of five pairs of pins (and, therefore, 5 possible places for the jumper). In a Western Digital hard drive, the jumper should be moved to the center position. 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 center pins vertically.



**Quantum/Maxtor
Set as “Master”**



**Two-jumper Maxtor
Set as “Master”**



**Western Digital Performer
Set as “Master
with Slave Present”**

4. MOVING THE EXISTING DRIVE (ADD KITS ONLY)

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.

With the hard drive bay upside down on the TiVo lid, use your Torx T15 L-key to 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.

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 T15 L-key that was included with your kit.



5. REMOVING THE EXISTING DRIVE (TWO DRIVE REPLACE KITS ONLY)

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. (See picture above). With the hard drive bay upside down on the TiVo lid, use your Torx T15 L-key to 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. Remove the factory hard drive and set it aside.

6. CONNECTING THE NEW HARD DRIVE(S) TO THE DRIVE BAY

ADD KITS: 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. **DO NOT CHANGE THE JUMPER SETTINGS OF ANY DRIVE THAT YOU RECEIVED IN YOUR KIT.**

DUAL DRIVE REPLACE KITS: Included in your upgrade kit are two hard drives and a bag of screws. Attach the "B" drive in the position closer to the fan (see the picture marked "Before" above, which shows the location for the B drive). Attach the "A" drive in the position closer to the end of the bracket (see the picture marked "After" above, which shows the position for the "A" drive). To attach these two drives, use the four screws included with your kit and the four screws that you removed from the factory drive. **DO NOT CHANGE THE JUMPER SETTINGS OF ANY DRIVE THAT YOU RECEIVED IN YOUR KIT.**



NOTE: Check to be sure that your drives are attached so that the drive connectors face the same way. The fan cable should be opposite the drive connectors.

7. REPLACING THE POWER CABLE AND IDE CABLE

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 IDE hard drive cable from the TiVo.

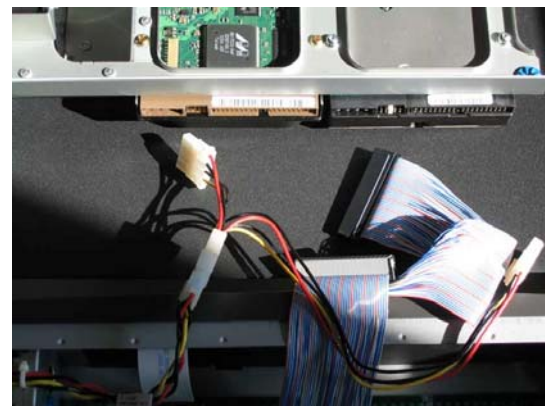
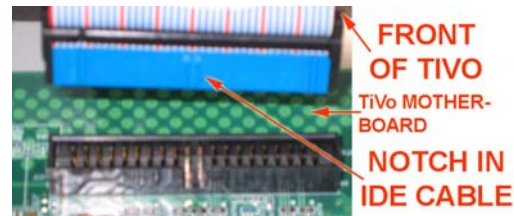
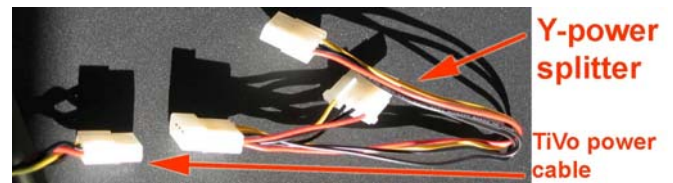
Carefully remove the gray ribbon cable from the TiVo's motherboard and set it aside. Pull straight up from the black plastic piece attached to the motherboard. Be very careful with static and do not touch the motherboard itself. You will not need the cable for this upgrade.

Take the red/yellow/black power splitter cable included with your upgrade kit and connect it to the TiVo power cable that you removed from the factory hard drive (only one end of the splitter cable will fit into to the TiVo power cable).

Install the hard drive cable that was included in your upgrade kit into the motherboard. When looking at the cable, you will notice that two of the three connectors are closer together than the other connector. The end that attaches to the motherboard is the one closer to the middle connector (generally the blue connector). The two connectors that are further apart will (generally black and gray) will connect to the two drives (see below). You will notice a slight groove in one side of the plastic connector. That small groove aligns with the groove on the motherboard socket.

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

NOTE: Your IDE cable may look different than the one pictured.

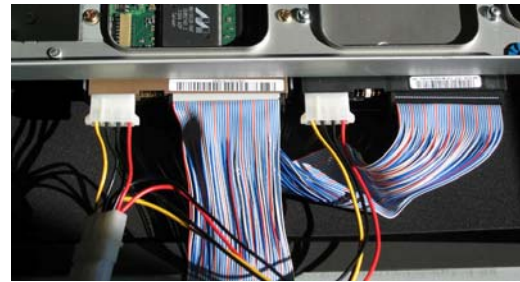
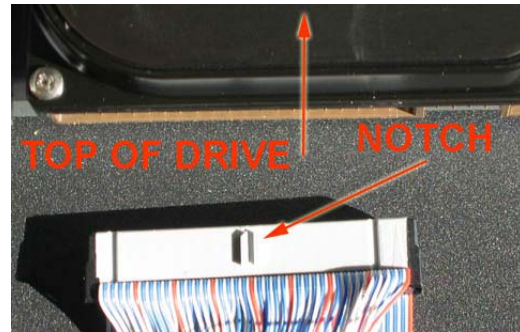


8. CONNECTING THE POWER AND HARD DRIVE CABLES TO THE DRIVES

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.

Connect the IDE hard drive cable to each of the hard drives. The *middle* connector (generally gray) attaches to the "B" drive (in two drive upgrade kits) or the added drive (in one-drive add kits); the *end* connector (generally black) attaches to your "A" drive (in two drive upgrade kits) or the factory drive (in single drive add kits). 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.

NOTE: If the IDE cable does not reach both drives, then you can and must reverse the cable (so that the blue end is connected to the factory drive).



9. RE-ATTACHING THE DRIVE BAY

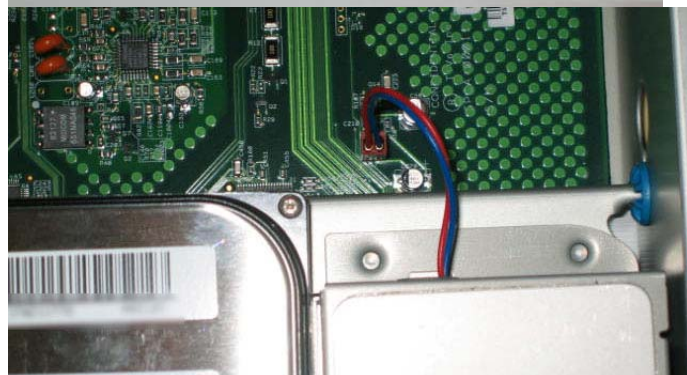
Now, carefully flip the drive bay over. You will need to insert the two pins on the right into the light blue grommets, while at the same time watching the power connectors and the gray hard drive cable. You will want to tuck the power cables down into the TiVo (in front of the hard drives). You will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

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.

Screw the two screws (and gold inserts) back into the holes on the left side of the drive bay using the Torx T15 L-key.

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

Fan cable Pin in blue grommet



10. RE-ATTACHING THE TIVO LID

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. Once the lid is in place, reattach the four Torx screws using your T10 L-key.

NOTE: The Hughes GXCEBOT looks different from the TiVo pictured at right, but the lid and screws attach identically.

NOTE: In two-drive replacement kits, you may see a message on your TiVo screen that says, "Clearing and Deleting Everything. This will take an hour." It will actually take about 10 minutes and is totally normal.

NOTE: **IF YOUR GXCEBOT IS STUCK AT 28%:** Please see this webpage for the solution to this DirecTV Problem:
http://www.weaknees.com/directv_problems.php

Reconnect your TiVo to your television and power it on. After you have gone through guided setup, you will be able to verify your TiVo's new capacity in the System Information screen.

ENJOY! We thank you very much for your purchase and hope that you enjoy your newly-upgraded 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!

