

# Korg D16 Internal Hard Disc Drive Upgrade

**Note :** *I accept no responsibility for any damage that may be caused by performing the following operation. It is not an approved Korg modification and is performed entirely at your own risk.*



You will need:

- #2 crosshead (Posidriv) screwdriver
- 11mm ( $\frac{7}{16}$ " ) socket-spanner or point-nosed pliers, to remove 'Value Dial' retaining nut
- small jeweler's screwdriver or hook, to remove knobs
- hand towel (or similar), to 'cushion' the work surface
- grounding strap, to eliminate static electricity
- small container, to keep small parts safe whilst working

Place the hand towel on the work-top, so that the top panel of the D16 is not scratched when it is inverted. You should take normal anti-static precautions, eg. have a grounding strap connected between your wrist and an earthed (grounded) contact.

Ensure you will not be disturbed, especially by children or pets.

When you are ready .....

Remove the input trim and the headphone level knobs. They all just pull off but you may need to prise them with a small jeweler's screwdriver or small hook.



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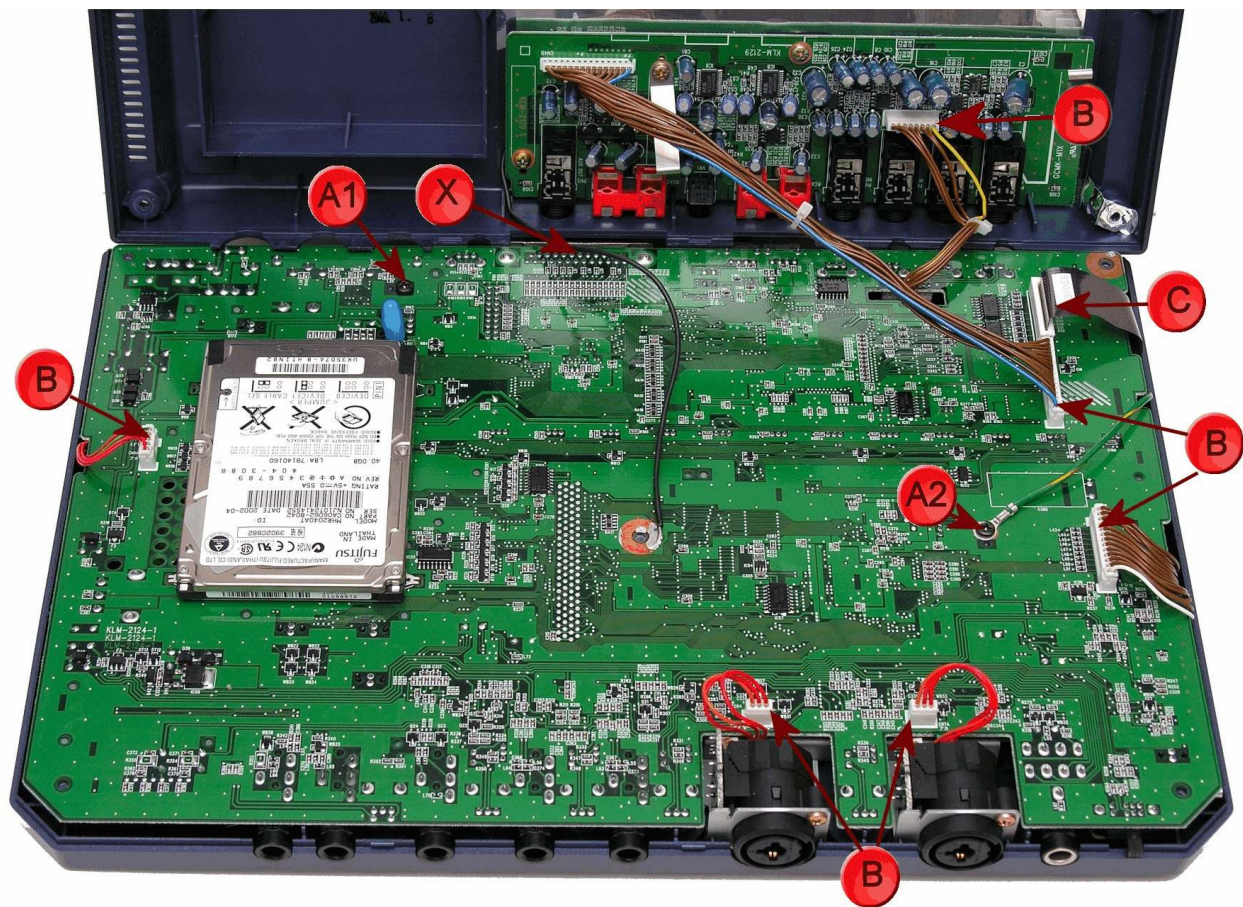
The Value Dial knob is removed in the same manner as the trim knobs. Once it is removed you will see the retaining nut for the Value dial encoder, this should be removed with the 11 mm ( $\frac{7}{16}$ " ) socket-spanner or by careful use of point-nosed pliers.

Now turn the D16 over, being careful not to damage the finish to the top of the case, especially to the raised display surround.



The case is held together with 5 cross-head screws, arrowed. Unscrew them and keep them safe along with the other small parts already removed.

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Lift the bottom of the case carefully. There are two wiring looms that connect the small circuit board in the lower half of the case to the main mother-board.

The six connectors, marked 'B', need to be unplugged. They can be quite tight, but need to be unplugged gently by lifting each end of the plug in turn until it is released. Fine point-nosed pliers can be useful here to lift the plug, but make sure you do not pull on the cables themselves.

The flexible ribbon-cable, marked 'C', has a different type of connector. This is released by lifting the plastic body slightly which locks the ribbon in place. Once unlocked, the cable can be pulled easily from the connector.

Remove the two screws A1 and A2, noting that A2 secures a ground wire in place.

You should now be able to carefully lift the motherboard out of the top half of the case. It is attached to the display panel by a short ribbon cable, which may be unplugged, although it is not strictly necessary to do so.

*Note: The cable marked 'X' is not a standard Korg fitting. This wire is a result of performing the 'Aux Send Modification' detailed in Brian Smith's instructions. (The documentation can be found at <http://www.amgard.net/misc2.htm>)*

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On the other side of the motherboard you will find the four screws that hold the disc drive in place.

Remove these screws and then slide the drive out of its connector.



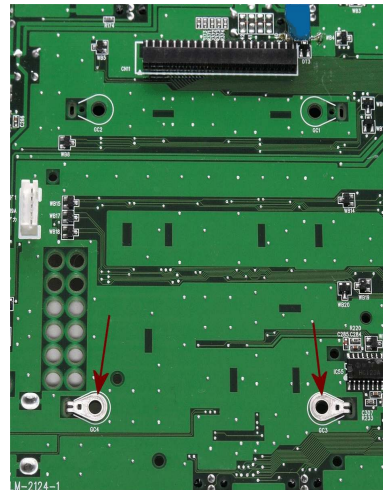
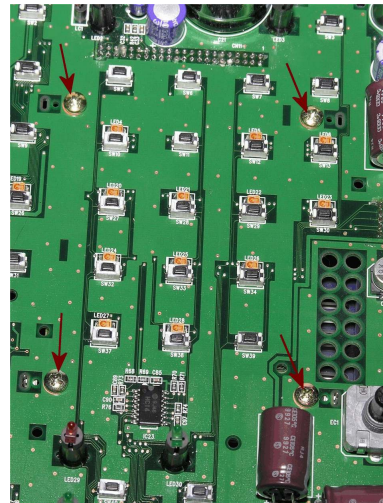
The original drive in my D16 had two small pieces of adhesive fabric wrapped at the connector end.

These form small, thin insulating shims which should be transferred to the new drive if possible.

Re-assembly is done by careful back-tracking of the above instructions.

There may be some grounding washers, (arrowed), under the disc-drive, (mine had two in place). Be sure that you do not lose them when installing the new drive.

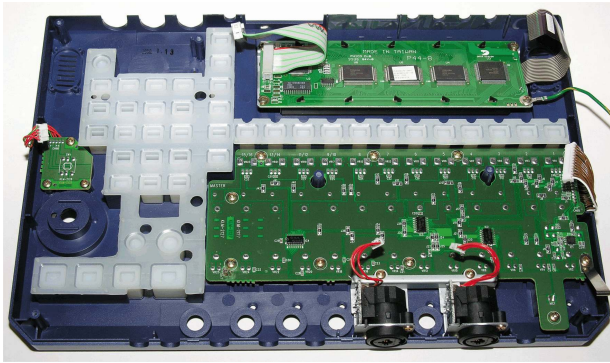
Do not over-tighten the screws that hold the disc-drive in place as this can lead to stressing of the motherboard.



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Install the motherboard back into the top half of the case, making sure that all of the connectors are feeding through and around the circuit board. Refer to the photograph on page 3 for details on the connectors.

It is worth checking that the rubber button tops (SYSTEM, RECORD, TRACK, etc) are correctly located - they can become displaced during the process.



You may need to manoeuvre the motherboard slightly, to ensure that the LEDs and buttons line up with the top panel.

Replace all of the 'B' connectors, and the two screws, (A1 and A2), remembering that A2 holds the ground wire in place. The ribbon cable 'C' pushes gently, but fully, into its socket and then the lock is pushed down to secure the ribbon. Pull gently on the ribbon to check that it is locked in place.

Replace the lower half of the case, and fix in place with the five retaining screws. Turn the D16 over and replace the Value Dial nut and knob, and finally the input trim and headphone level knobs.

When you power-up the D16 it will ask whether you would like to Initialize the new drive - answer 'Yes' and the drive is configured by the D16 in a few seconds.

*Some Disc-Drives that are known to be compatible with the Korg D16 DRS*

Manufacturer	40Gb	60Gb	Notes
Fujitsu	MHT2040AT	MHT2060AT	All 4200rpm models with Fluid Dynamic bearings.
Toshiba	MK4021GAS	MK6021GAS	40 or 60 Gb would seem to be the optimum choice, keeping in mind the 100 song limit on the D16.

*Both Fujitsu and Toshiba have 5400rpm models available, but at the time of writing I have not had any reports as to their compatibility with the D16.*