How to replace the original FDD with an emulator in a Roland W30

Observe proper anti-static precautions at all times. Disclaimer: the author of this document and/or the seller of the emulator accept no responsibility for damage to your keyboard or to yourself while following these procedures.

These instructions concern the removal of the existing factory-fitted Chinon FDD (floppy disk drive) and replacing it with a FD emulator inside the W30. In my case, this is a Gotek SFRM72-FU-DL available from AliExpress and other eBay sellers for about EUR 30 incl. free shipping (May 2019 price). However, the following is equally valid for other kinds of emulator such as the Rev F HxC available from Lotharek in Poland.

Please read through the **WHOLE** of the document first before doing anything, and decide if you have the skills and competence to do the procedures. Roland in their wisdom (??) made doing this EXTREMELY difficult (whether by deliberate design or just plain stupidity, we will never know – comments please??), so you need to have your wits about you at all times. Allow at least an hour or two....or more. Go slowly and carefully, and don't mix up where the screws come from!! Use a magnetic screwdriver as dropping a screw into the internals is not desirable.

If your emulator has a white or beige plastic case (instead of the preferred black), and you are worried about aesthetics, you might want to paint the front fascia of it with a suitable type of paint (can't advise you exactly which type is best as that depends on the type of plastic used in the manufacture). Me, I prefer the juxtaposition of white on black as it marks out my W30 as different from the crowd. (Laziness has nothing to do with it.) So you might want to do that now and give it plenty of time to dry. If using spray paint rather than brush paint, you ought to disassemble the emulator and take out the innards beforehand.

[Of course, ideally you should first test that your new emulator works with your W30. Follow the instructions below up to the asterisk (*), take the ribbon cable/Molex connector out of the back and "piggy-back" the emulator on top of the W30, load a system disk image and make sure the synth boots.]

Turn the keyboard over, and rest it on a soft, flat surface (e.g. a clean, dry bath towel on a sturdy table) to prevent scratching/damage.

With the back of the keyboard nearest you, remove all 15 screws from the bottom plate of the keyboard. (Not necessary to remove the rubber feet). Keep them in a small glass or jar, away from cats, dogs and children (speaking from personal experience here)!!

Remove the 7 screws from the rear side of the keyboard where the bottom plate meets the edge, underneath the power switch and W30 logo. These screws are different to the others so keep them separate.

Gently and carefully lift off the bottom plate. If you feel any resistance, check and double check all the screws are out.

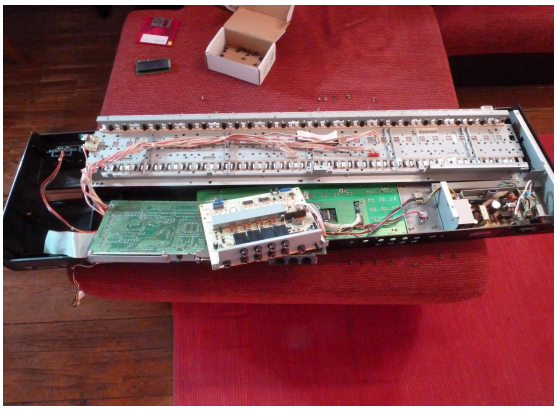
You will see two upside down circuit boards. The smaller analogue one is next to the phones and multi-out quarter-inch jack sockets. The bigger one is the main board. Do not touch directly any of the components on the boards or those anywhere else inside the case.

First, unplug the ribbon cable and Molex power connector from the FDD. Note the red stripe which indicates pin 1. (*) This MUST be reattached to the emulator in the right orientation. Serious damage can occur to the emulator and/or W30 if you get it the wrong way round. Likewise, the Molex power adapter must be attached correctly. I suggest marking the underside of the emulator with a Sharpee/felt tip pen to show where Pin 1 is.

You need to partially remove the main board, but it is not necessary to unplug all the looms and other wires from it. Remove the six gold coloured screws. Also remove the the 2 black screws either side of the MIDI sockets. Gently ease the main board out of its position. It may be also necessary to remove the 3 black screws of the holding bracket (from inside the '0' of the W30 logo to the right of the DB25 SCSI Option port). (Tip: when reassembling, attach the three main board screws closest to the edge of the synth to this bracket FIRST, and then feed the contrast knob and DB25 connector through the rear chassis. Then put in the other 3 main board screws.)

Do the same for the analogue board. Again, it is not necessary to remove it completely – it is enough that you can move it slightly to gain access to the screws which hold the keyboard assembly in place.

Photo courtesy of Miro Svetlik:

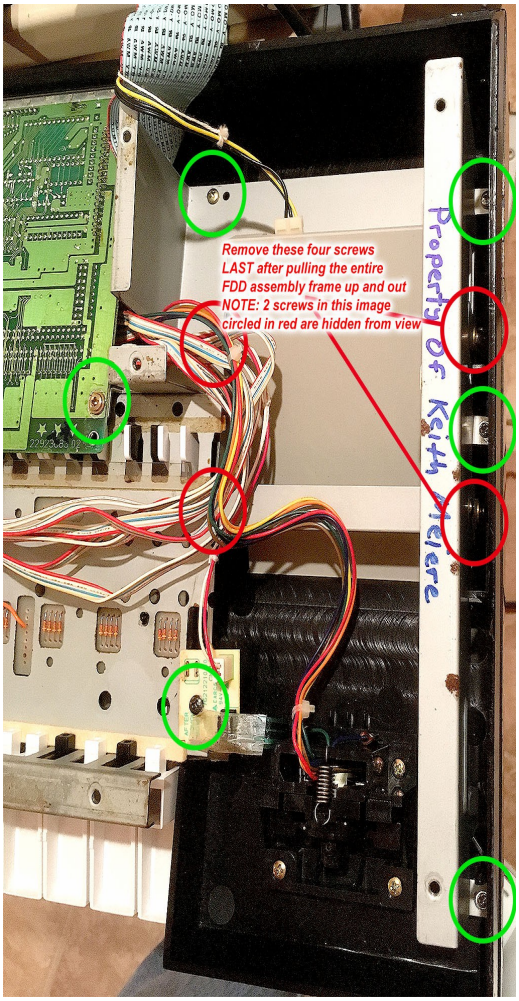


Remove the screw from the aftertouch board (close to the pitch bend/modulation wheel (top left of photo).

Remove the screws from the keyboard assembly. They are in a vertical orientation (pointing to the ground) and can be seen in the photo above between the circuit boards and the keyboard assembly on the silver bar.

In my case, I only removed a few from the left side to about halfway along, and that gave me enough clearance when (gently) lifting up that end of the keyboard to get the FDD mounting cage assembly out.

Photo courtesy of llamamusic:



As Keith says, remove the screws circled in green first. Some are hidden from view. Gently and carefully pull out the whole mounting cage assembly. Now it's a simple matter of undoing the four FDD retaining screws (circled in red) and putting in the emulator (upside down for you, so that it's the right way up when the W30 is in its normal position).

Reassemble everything in reverse order to the above. (However, I did not put back in the last screw of the FDD mounting cage which is next to the corner of the main board (underneath the keyboard) to make it easier for the next person.) Reattach the FDD ribbon cable and Molex connector. Power on, and check all is OK.

My tip is to hang on to the old Chinon FDD – keep it safe, away from extremes of temperature, moisture and magnets; you never know if you will need it again. Don't be tempted to sell it - it's not easy to find a replacement!!

Photo courtesy of roses2at (me):

Good luck!!

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