

KORG POLY800 MDK (Midi Dump Kit) - guide mk3

Read the **WHOLE** guide before starting work.

Check your wiring loom has the same colour sequence as shown on the image at the top of page 4. This should be red, black, yellow, blue, green, white, grey, brown. If it doesn't, download the appropriate build guide from [the site](#).

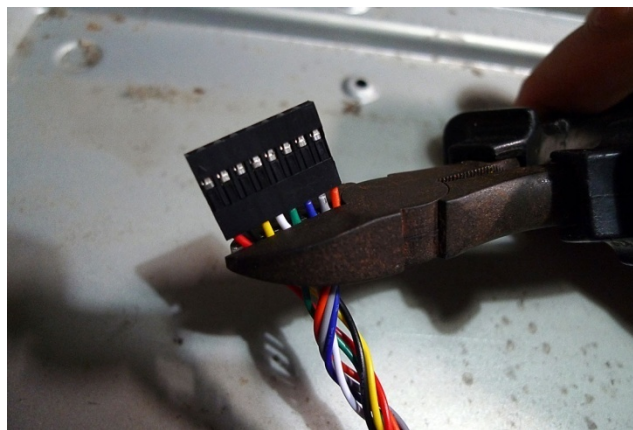
The Korg Poly800 MDK was an upgrade kit for the Poly800 mk1 that Korg released for what seems like about 20 minutes in the late 80's. What it does is allow you to load and dump the entire patch memory to and from your synth to your computer via midi system exclusive (sysex) data.

The original Poly800 mk1's only allowed you to save and load sounds from cassette, like on early home computers, although WAV or mp3 recordings of the audio data played from your computer also work once you've figured out the correct levels.

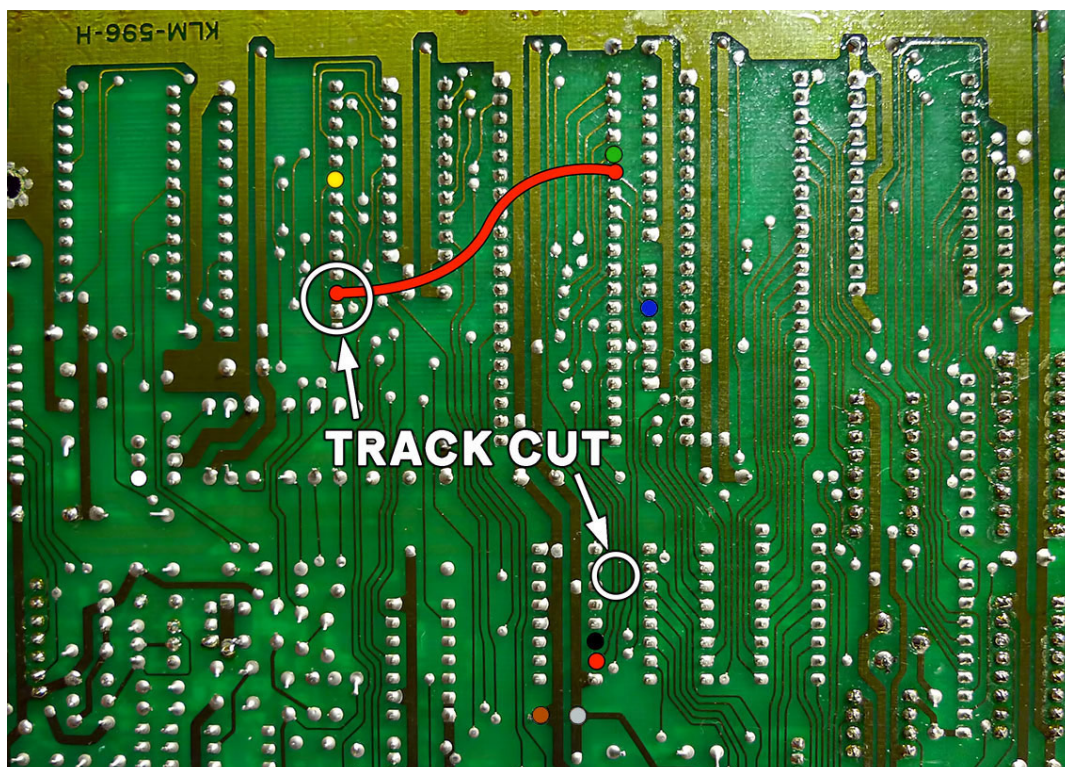
This kit consists of an updated operating system in the form of the POLY MDK EPROM chip, a small MDK PCB, a couple of PCB mounts, and an eight way wiring loom.

You will have to do a small amount of soldering, and also cut three circuit board tracks on the Poly800 main board, so you're going to need a very steady hand.

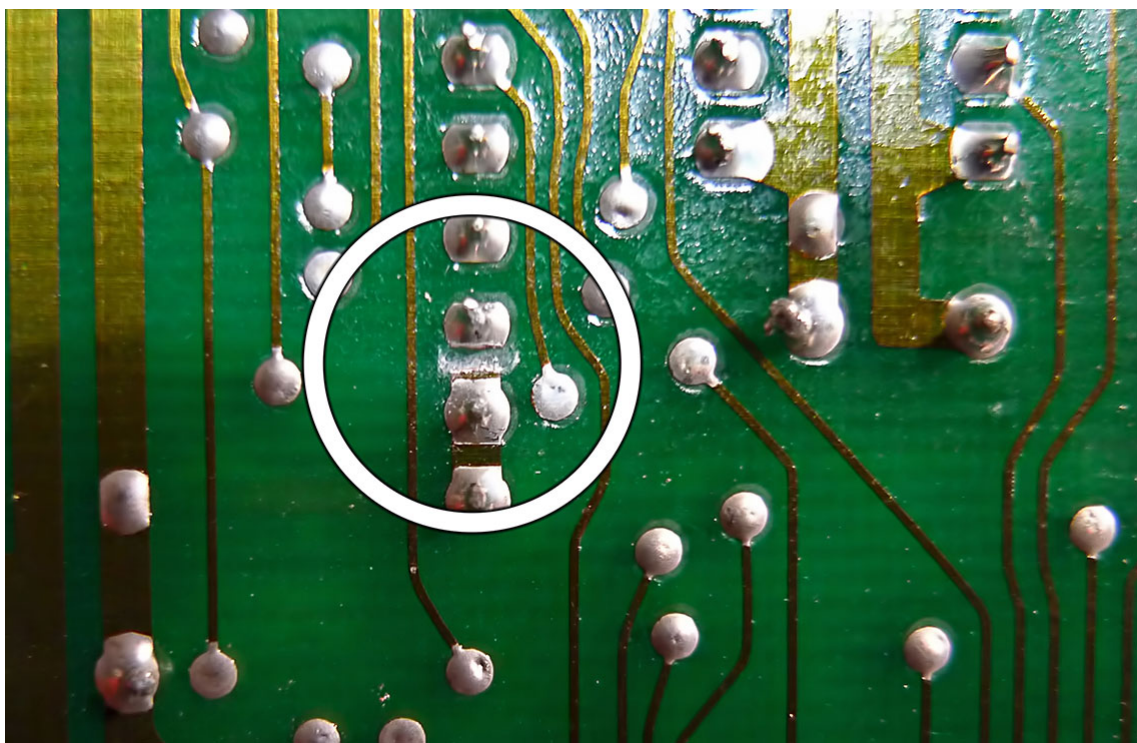
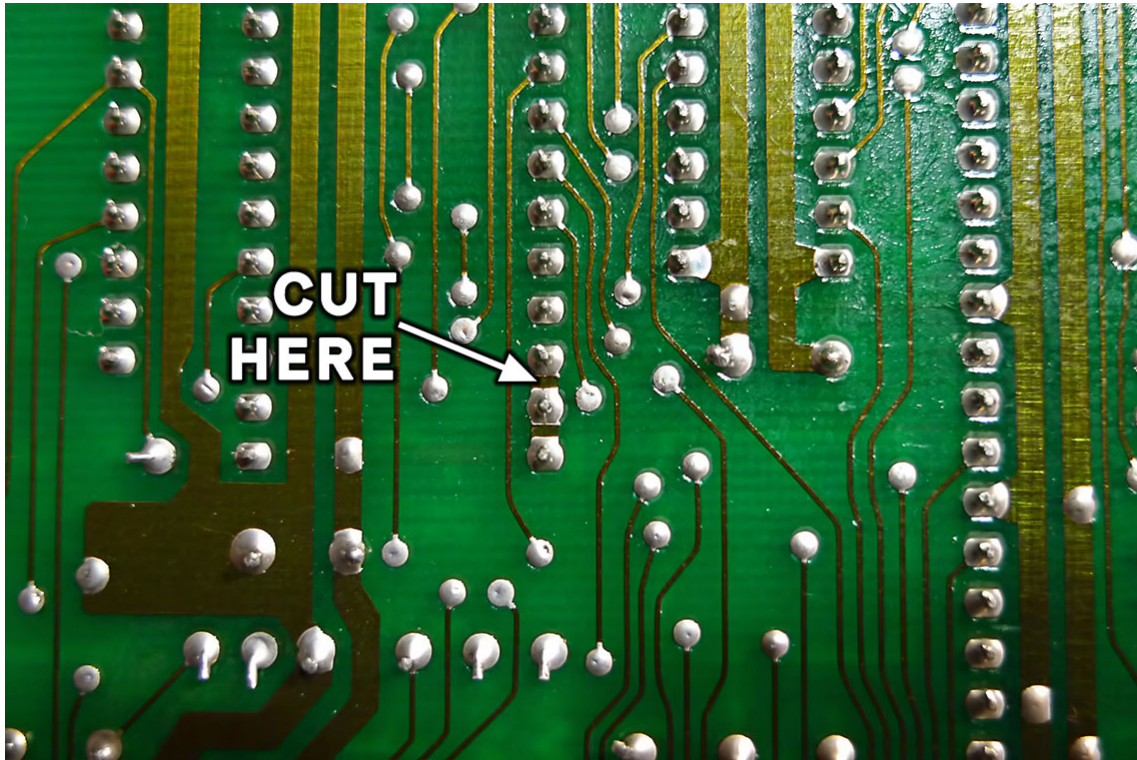
First of all you'll need to cut one end off the wiring loom



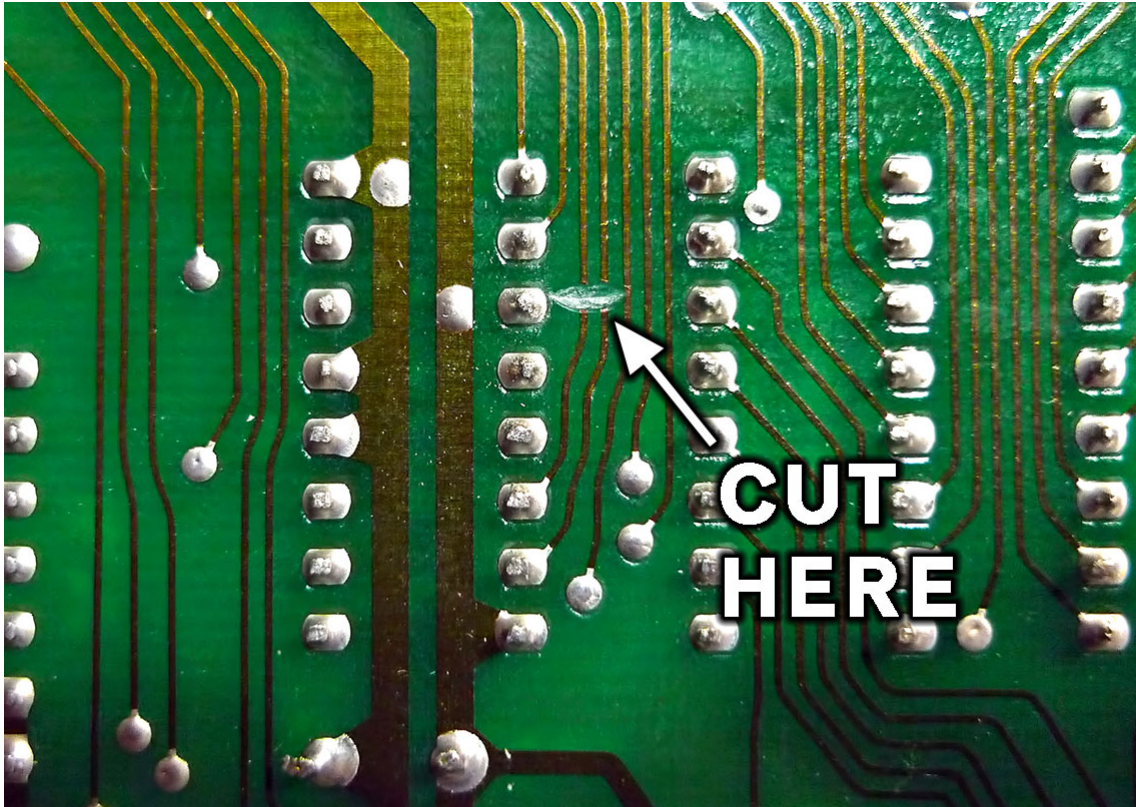
Locate the part of the Poly800 main board shown below. This is with the top of the case open, and the board flipped upside down. This is the area underneath the operating system EPROM chip in the socket etc.



The two areas labelled 'TRACK CUT' are shown in close up below. On the top one you need to cut a PCB track linking two IC pins as shown. For the bottom one you need very carefully cut two thinner PCB tracks. We would advise cutting tracks using a hobby drill and a very small drill bit as a kind of end mill to cut through the metal, but be careful not to cut too deep. Alternatively you can use a sharp knife to cut and peel back the track slightly, but you need a very steady hand as you really don't want to slip and cut other tracks by accident. Once you've made the cuts, its probably a good idea to check the connection is actually broken using a continuity tester on a multimeter or similar.



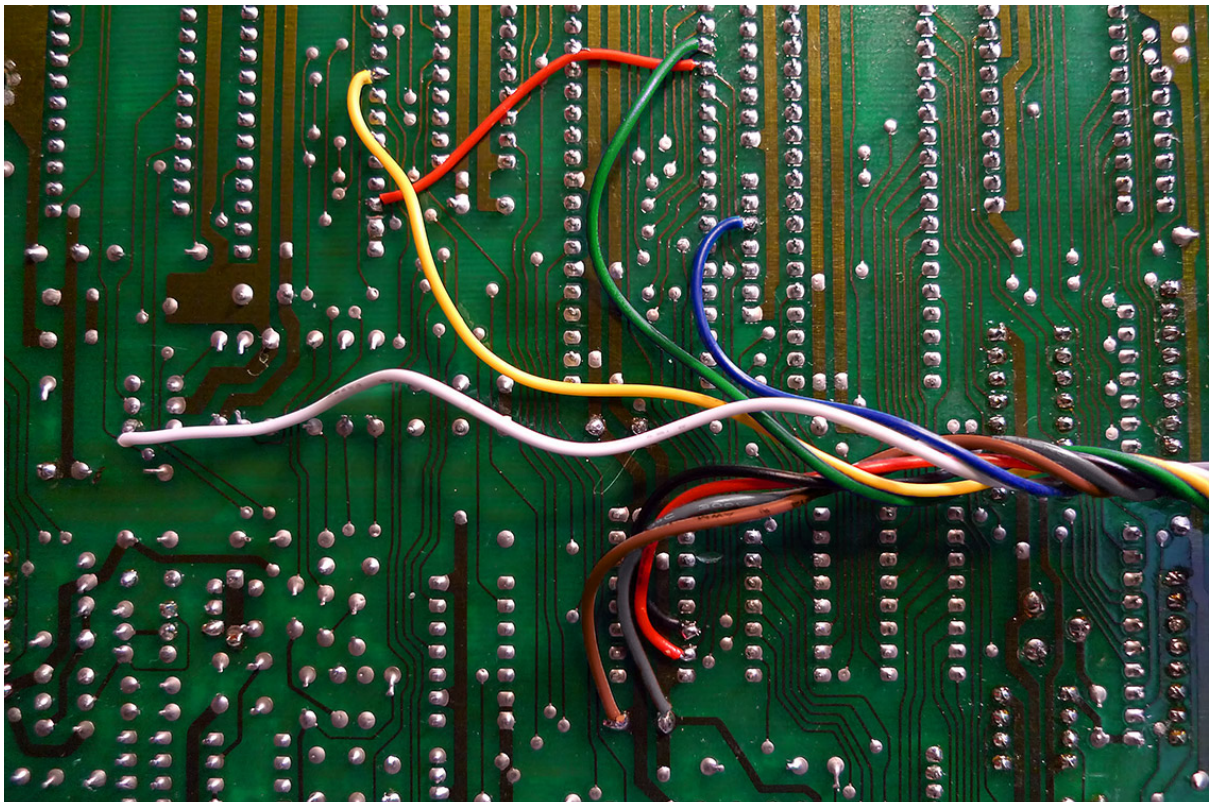
Top track cut between two IC pins



Bottom double track cut.

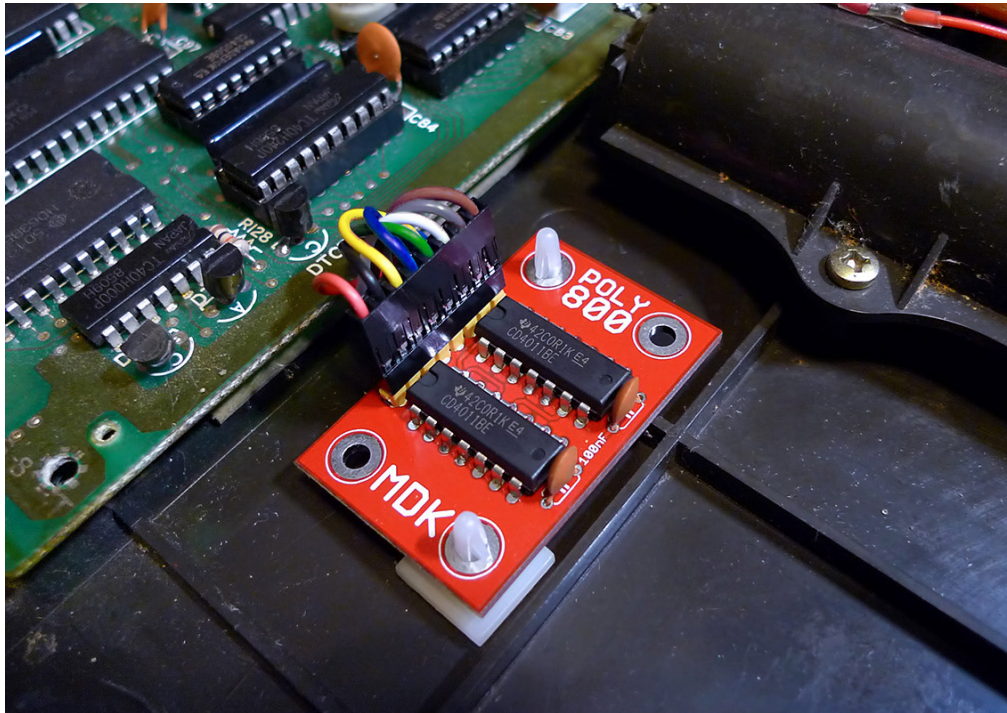
Next you need to take a short piece of wire, and use it to connect the two points shown by the red line in the image on the first page, and the red wire on the image below.

Now you should connect the white wire to the point marked with the white dot on the left of the image on page 1. The reason we wire this one in first is because its the longest, and you can now use it as a reference to cut the others down to size.



Pull the connector to the right of the board so the white wire is fully extended, then locate the solder points for the other wires as shown by the dots on the image on page 1 and the wiring photo above. Cut the other wires down to the right lengths and solder them in place. It doesn't have to be that accurate, but the less loose wiring you have the better.

Put the main board back in position, with the MDK connector sticking out of the right hand side, then stick the mounting posts through the MDK PCB holes in opposite corners, connect the board to the MDK connector, and stick the board in position in the base of the Poly800 case as shown below.



Make sure the connector is oriented the same way around as shown, with the red wire on the bottom, and the grey wire on the top.

Now lever the old operating system EPROM chip out of its socket using a small screwdriver or similar, and replace it with the POLY MDK chip as shown below. Make sure you have it the right way up.



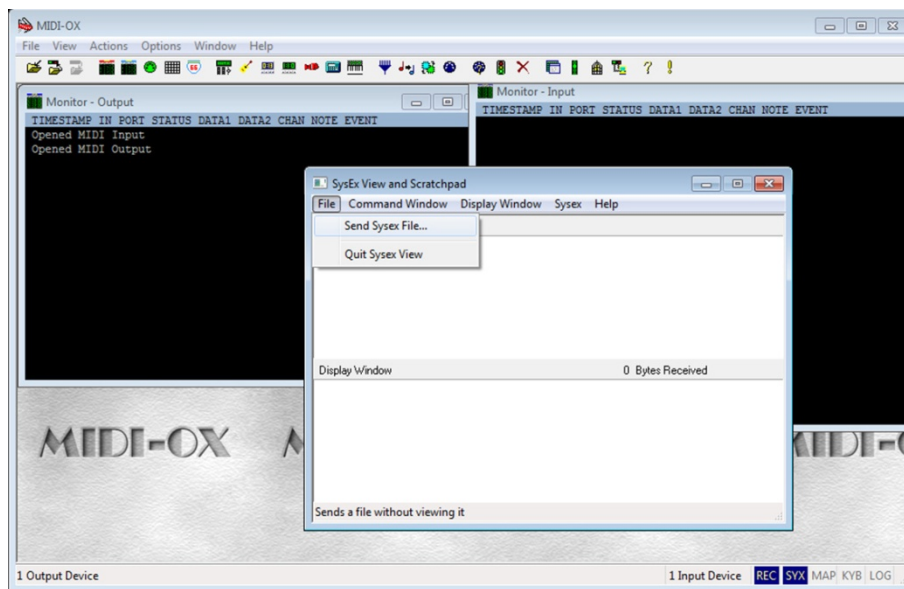
In order to send and dump the memory you'll need a midi utility tool such as MidiOX. You can download this for free [HERE](#).

To send a sound bank to the Poly800 you only need the midi out from your computer connected to the midi in of the Poly800. If you want to dump the Poly800's memory to a computer, you'll need two way communication with both the midi in and out connected at both ends.

Sending a bank using MidiOX.

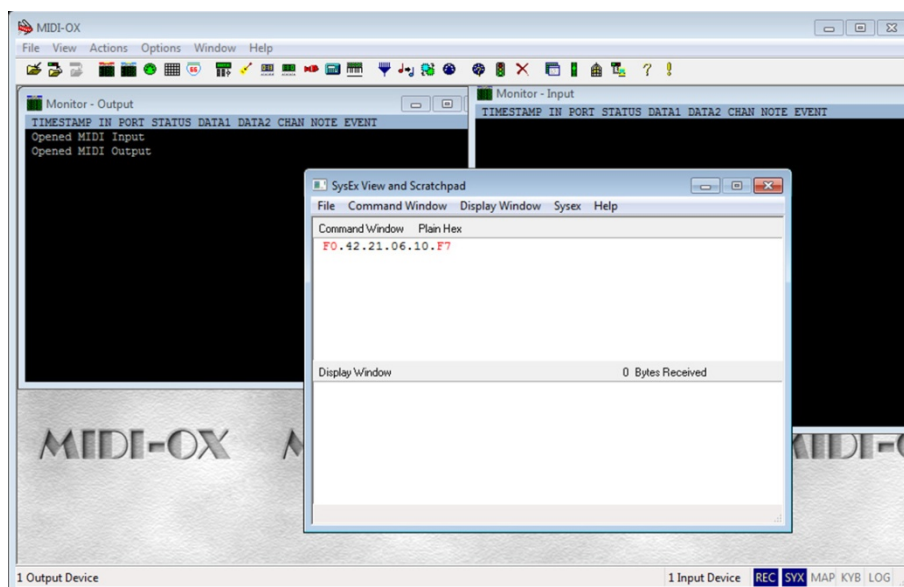
We're not going to go into details of how to set up MidiOX on your computer here. If in doubt, read the manual! You need to set MidiOX to the same midi channel as your Poly800 and activate sysex if its not enabled. Then open the sysex window from the view menu, and select 'send sysex file' from the file menu in the new window, as shown below. Navigate to your sysex file and open it to send it.

Your Poly800 display may blink a little while it receives the data. The sound currently selected in the Poly800 won't actually change immediately. You need to select a different sound, and then go back to the initial one, as it needs to pull the sound up into the edit buffer from the new sound bank.

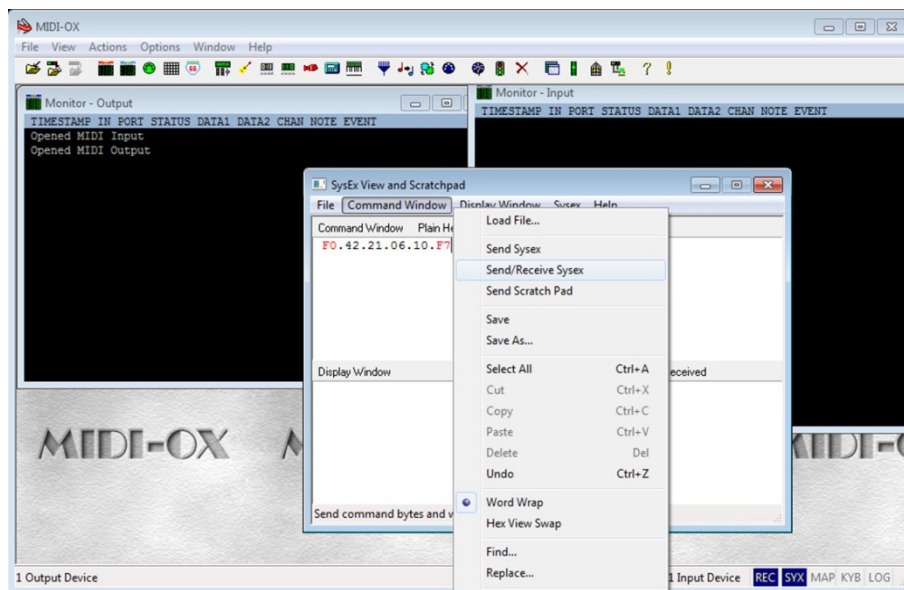


Receiving a bank using MidiOX.

This is a little more difficult. In order to get the Poly800 to dump its memory, you have to send it a sysex dump request code. Open the sysex window, and in the top pane type F0.42.21.06.10.F7 as shown below.



Now click on the 'command window' menu, and select 'Send/Receive sysex'. If you have both the midi in and out connected properly, this should send the message to the Poly800 to dump its memory, and MidiOX will receive the data in the sysex window. You should now see an array of hexadecimal data. You can save this as a sysex data file from the file menu, and send it back to the Poly800 any time you want..



Any Poly800 mkl sound banks that we have found and have converted from audio data to midi sysex, can be downloaded from the [MDK page](#) on the site. These have been confirmed as working.

Job done