Getting Started with N or DX

Connecting to the Printer the First Time

By default, the printer is meant to be used via its Network port.

You will need:

- An available network jack for wired Ethernet. These are most often located in the wall, hopefully in a convenient place.
- Possibly, permission from your Technology or IT team to put a device on the local network.

Technical Details (possibly needed by your technical admins)

The PolyPrinter DX and N series printers by default use DHCP to obtain a local subnet address from the gateway. The DHCP protocol will assign the printer an address. Usually, the same address will remain assigned to the printer for quite some time, but there are no guarantees.

If possible, even if your local network administrator simply allows the printer to use DHCP to obtain a network I.P. address, it would be best if in the long run, the administrator would then also make that the permanent address of the printer (a permanently assigned I.P. address.)

Finding the I.P. address

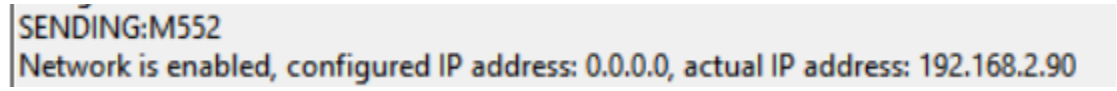
If the DX printer has been connected to the local network, it should obtain a connection on the network within about 30 seconds.

The easiest way to find the IP address is to temporarily hook up the USB port of a laptop or other handy computer, especially one that is going to be used to control the printer and do the slicing.

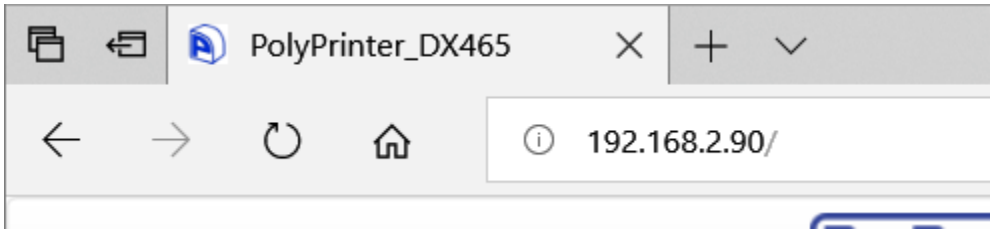
Open up the PolyPronter application, and hit Connect. If it does not connect, try each port in the COM port list dropdown (they seem to end up being the higher numbers for networked printers).

Once connected, type “M552” in the text entry area at the bottom right of the window, beside the Send button, and then press that Send button.

You should see something like this:



You should be able to take that last IP address, and enter it into the address bar of any browser on a computer on the same local network, and open up the main page for the printer.



The main page should be displayed (may take a couple of seconds to load).

Once you have established that you are successfully connected to the printer, you should hit the “star” symbol at the right side of the address bar of the browser to save the printer as a Favorite. That may help, when reconnecting, some other time.

Also, make a note of the I.P. address that you connected with, and also put a label or sticky note on the printer with its address, especially once your network administrator has assigned a permanent address.

If the local network does not allow simply connecting a new device to the network and having it automatically obtain a unique I.P. address using the DHCP protocol, you may need to work with the I.T. department or whoever manages the local network.

They may need to know the MAC address of the printer in order to dedicate a Static I.P. Address to it. **Send M540 to find the MAC Address.**

Forcing the IP address

We do not recommend forcing the IP address.

It is virtually NEVER needed in a normal networked setup, because IT staff can normally just make a note in the network setup (DHCP table) that the IP address is to be a particular one, and that is easy for them to change if needed. Forcing it in the printer can make it very difficult to change!

The preferred technique is to set up the DCHP server in the local network’s main router so that when it sees the printer’s MAC Address, (Send M540 to find out what it is) it always assigns the same IP address. That way a network administrator can easily change that address just by managing the entries on the router.

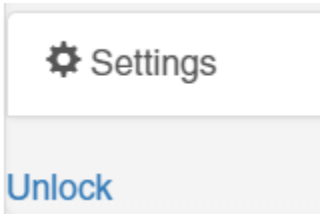
Also, then if the printer is moved to another network, perhaps temporarily, it will simply and automatically request an address, which can be found by sending M552, as described above.

If you must force the IP address (not recommended)

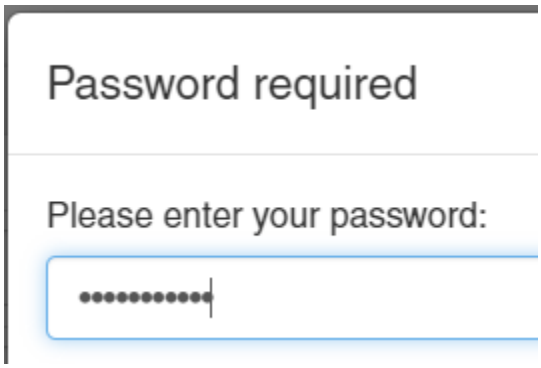
Connect with USB and PolyPronter.
Send M552 P<ip address>
E.g. M552 P192.168.1.33

Then establish connection in your web browser, and click the Unlock button on the bottom of left menu bar:

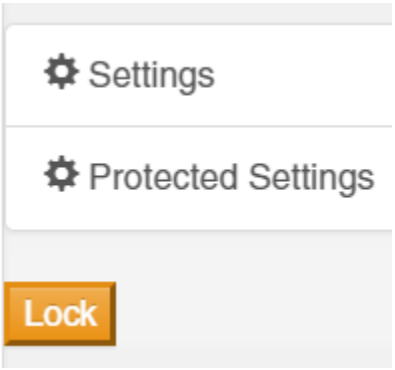
In the left sidebar, by default there is an Unlock button.



Click the Unlock, and a password window will open.



The password (for now) is “polycracker”. (This is not meant to be impregnable. We could add more security to this in the future if necessary.) Then hit Verify.
When it has been unlocked, you should see this in the left sidebar:



1. Click the Protected Settings button.
2. Click on the System Editor tab
3. Find the config.g file and open it for editing.
4. The network IP address setup is one of the first handful of lines.
5. By default it is commented out, so that the board requests an IP address from the local network DHCP server.

```
; By default it is already set up to use DHCP and get an address automatically.
;M552 P192.168.1.100                    ; IP address. (0.0.0.0 = use DHCP)
```

6. Uncomment it by removing the semicolon. Then edit the IP address to be what you want to lock it to.

7. Save the file, and hit the red Emergency STOP button in the top right of the window, or the red Reset button on the printer.
8. It should come up again, now with the forced IP address.
9. Send M552 (disconnect/reconnect USB) and see if it is the correct address.

Recovering from (Reversing) a Forced IP Address

If you still have access via a web browser:

Follow the steps above, excepting that you re-insert the semicolon at the beginning of the line with M552:

```
; By default it is already set up to use DHCP and get an address automatically.
;M552 P192.168.1.100                ; IP address. (0.0.0.0 = use DHCP)
```

The printer will then ignore the IP address and again try to get a fresh address from the network's DHCP server.

If you can no longer access the printer via a web browser due to something like a major network re-numbering:

Connect via USB, and PolyPronter

Send M552 S0 P0.0.0.0

Send M552 S1

This should temporarily reset the networking to try to get an address via DHCP.
After a minute or so, sending M552 to get the IP address should hopefully tell you what the new IP address of the printer is.
Connect via the web interface to that new IP address, and follow the steps above for editing the identification.g file to put the semicolon back in place, in front of the M552 command in that file.

Networking G-Codes:

M552 to find out the I.P. address
M552 P#.#.#.# to set the I.P. address

M552 S0 turn off networking, S1 to turn it on

M553 find out or M553 P#.#.#.# to set the Netmask (defaults to 255.255.255.0)

M554 find out or M554 P#.#.#.# to set the Gateway address

M540 to find out the MAC address. The address is unique.

Slicing Setup

Download this update from our web site:

https://polyprinter.com/content/DXSlicingSetup.zip

Unzip the contents and copy to the

C:\ProgramData\PolyPrinter\Kisslicer folder.

If you get asked about overwriting files, say Yes, to Replace files in destination.

The result should be that, for example, the Kisslicer_printers folder below that has the new printers added.

PolyPrinter.ini
PolyPrinter508.ini
DX 325 Single Color.ini
DX... etc. (8 DX printer types)

Setting up a Private network

If your installation has no possibility of connecting the printer up to the computer's network, you should still try to gain access to the web interface.

The easiest way to do this is to give the computer dual networks. In most cases where there's no available wired Ethernet connection for the printer, then neither is there wired Ethernet for the computer.

But the computer will likely then have a free Ethernet jack.

If the printer and computer are hooked up to something that has a DHCP server, like a small network router (rather than just a switch), then they should be able to talk to each other. It does require that the printer has a network address compatible with the computer's network address for the Ethernet wired port.

The computer will have two networks (WiFi and Ethernet), and the printer will also get an address on that second network, via the DHCP server.

The one requirement for this to work is that the Subnet must be different than whatever the school's Subnet IP address is.

For example if the WiFi network address for the computer is 192.168.1.xxx, then this added wired network DHCP server needs to be configured to hand out address on a different subnet, e.g. 192.168.2.xxx

A lot of basic routers use 192.168.1.xxx by default, and I think a lot of institutions do NOT use that range, so it might work OK out of the box.

Very likely, any old router laying around can be configured to do this job, (maybe turn WiFi off if equipped). You might want to reset to factory settings first.

If for some reason, the use of an independent router with DHCP is impossible, there is a manual address-setting method for both the printer and the computer, but it is a bit of trouble to set up.

Example

An inexpensive ($14 in 2024) network router that we have tested for this purpose is the Netis WF2412.

https://www.amazon.com/Netis-WF2412-Wireless-Repeater-Advanced/dp/B00GNUEC6O

Out of the box, it is configured for 192.168.1.1, so you may need to change this setting to avoid interfering with your local network IP address range.

Power it up, connect your computer to it with a cable connected to one of the four regular ports (not the blue WAN one).

Open a web browser and enter 192.168.1.1 as the address. You should see the Netis setup menu and status page.

To change the network's IP address range, click on the Network tab, and then the LAN tab:

In the IP Address field, change the 192.168.1 to something that doesn't conflict with your network. Normally, you can probably just change any one of the first three parts.

For example:

192.168.2.1 or 192.169.1.1

Hit Save to make the change. You will then likely need to unplug the cables or power down the router to get your computer to realize the address has changed. (Opening a CMD window and typing "ipconfig /renew" may also help.

Open a fresh browser page and enter the same IP address you just set the router's IP address to, to confirm you can still talk to it (means you are correctly on its network).

YOu should then be able to plug the networked printer into the router, and use USB and PolyPronter to find its IP address, which should have the same three initial numbers in its IP address, e.g. 192.168.2, and the fourth one being different e.g. 192.168.2.3

Now that the router is not conflicting with your computer, you should still be able to use your computer's WiFi (or a second network interface) to connect to your normal network, and still talk with the printer on this new mini-network.