YAOSM from Scratch

Written by Fahad Said

What you need:

PC with serial port
Solder
Soldering pencil/iron (15 watt preferred)
IDE cable or wire
Pre-drilled PCB – Radioshack #276-148
DB9 Female connector – Newark #79K5029
DIP8 Socket – Newark #52K3276
5.6V Zener diode – Newark #18C8950
1N4148 diode – Newark #44K0365
3x 2.2kOhm resistors – Newark #58K5030
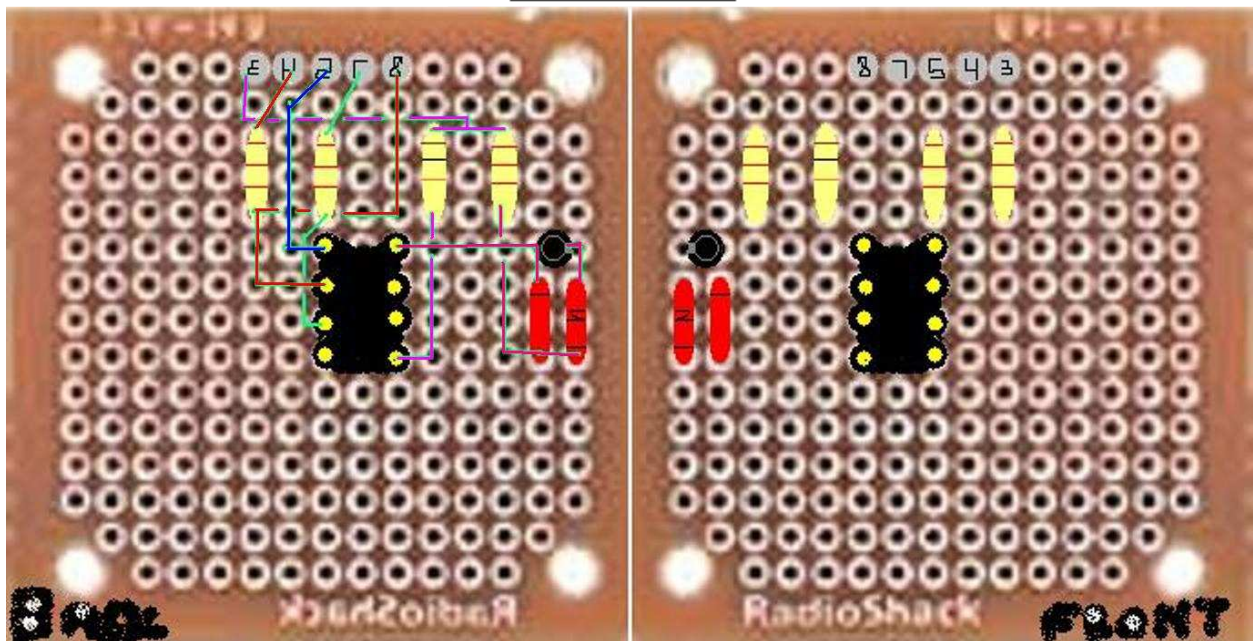10kOhm resistor – Newark #58K5002
25V 10uf electrolytic capacitor – Newark #70K9680
PIC 12F629 (get as many as you like) – Newark #67K0822

Building the programmer:

Ok, first thing when you have the parts is to build the programmer. Build it according to the following diagram (connector is the soldering side):
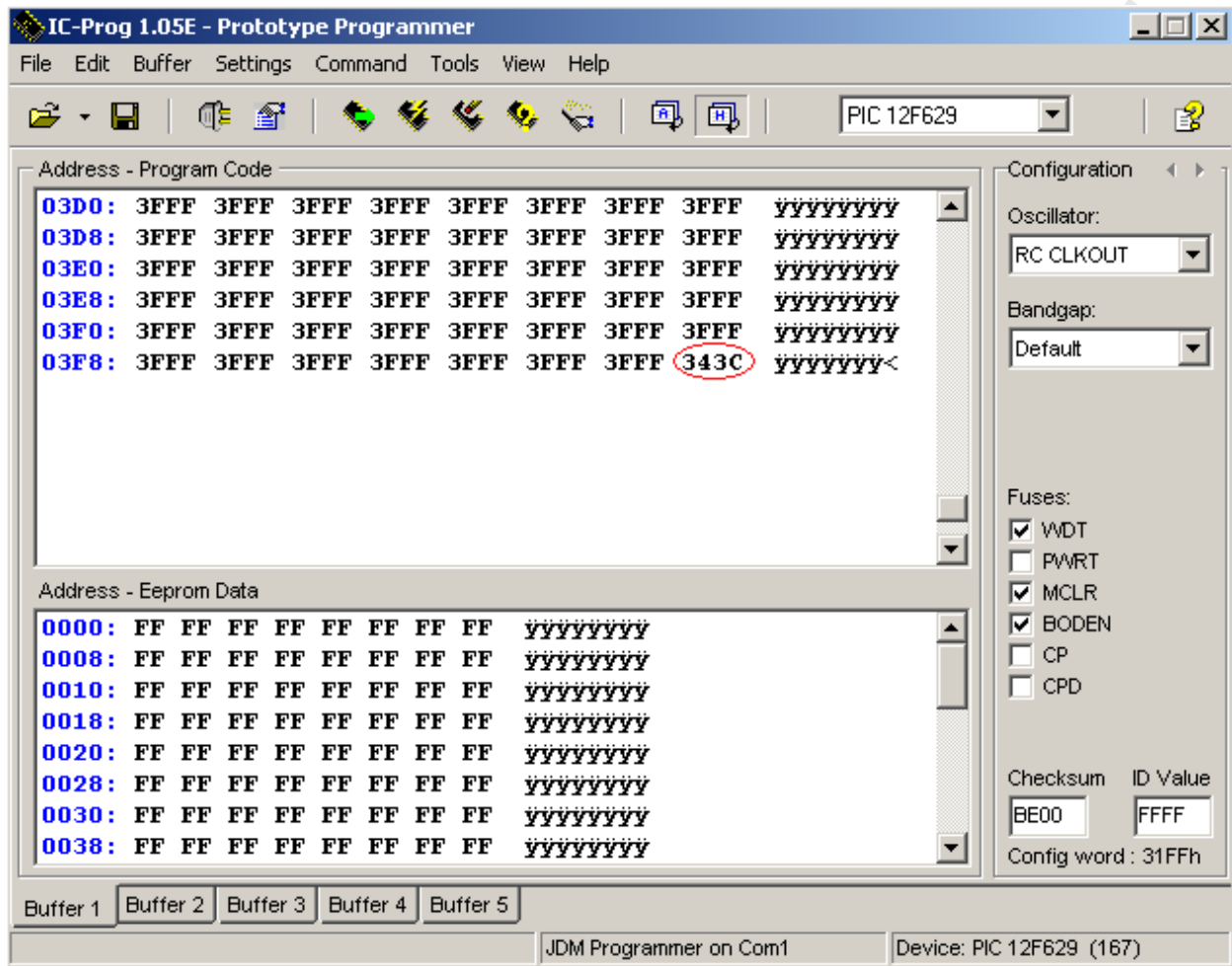
Programming the chip:

Place your PIC 12F629 in the socket (mind the notch) and connect the programmer to your PC serial port. Download IC-Prog 1.05E. Go to "Settings" -> "Options" -> "Misc" -> check off "Enable NT/2000/XP Driver".
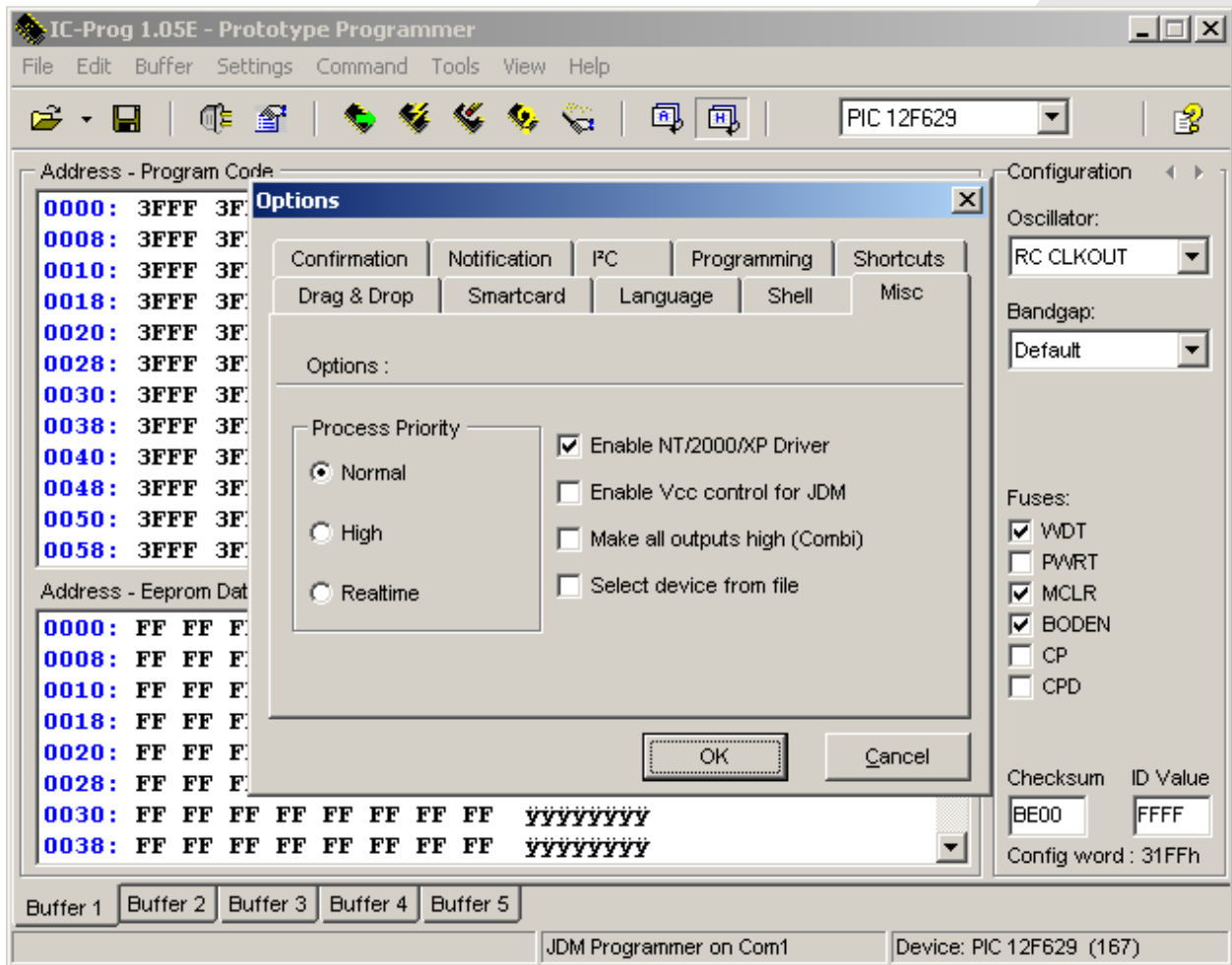
When asked to restart IC-Prog, click "Yes". From the scroll down list, select "PIC 12F629" and click the "Read All" button (the one with a green arrow). If built correctly, you should receive a different byte for the bandgap, as seen in the following picture. Write that down somewhere, you'll need it.

Open "yaosm_12F629_675.hex", scroll down and re-enter the bandgap for your PIC 12F629. Program the chip (click the chip with lightning bolt). If all is good, the chip should be written and verified properly. If not, recheck your programmer.

Installing the chip:

If you have a D2B chipset with the legs cut, you must grind down the chip and reattach the traces beforehand. Using the following diagram, install the chip.