

## Simple JDM PIC Programmer

by [hosam\\_eldin](#) on April 8, 2008

### Table of Contents

Simple JDM PIC Programmer .....	1
Intro: Simple JDM PIC Programmer .....	2
Step 1: The schematic .....	2
Step 2: The PCB .....	3
File Downloads .....	3
Step 3: Toner Still on the PCB .....	3
Step 4: Etching .....	3
Step 5: Final PCB .....	4
Step 6: Soldering .....	4
Related Instructables .....	4
Comments .....	5

## Intro: Simple JDM PIC Programmer

I have built this project to burn my small PIC's

This is a serial programmer works on the RS232 ( PC serial port ), known as JDM Programmer, thanks to the site <http://pic16f84.hit.bg/> which contains the schematic and the programmer software.

The programmer is powered from the Serial port itself, so there's no need to any external power supply. But be careful this circuit will not work with the Laptop Serial port due to the weak voltages it has.

- I have used a very nice programmer software called "Win PIC Programmer" you can download it from <http://freenet-homepage.de/dl4yhf/winpicpr.html>, it's very stable and powerful.

The project has been tested with the following IC's :

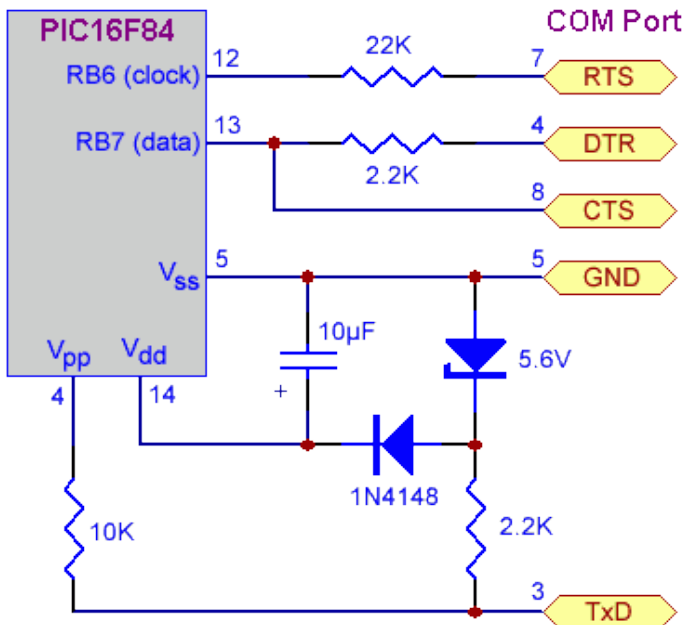
PIC16f84A

PIC16f628A



## Step 1: The schematic

The Schematic for this project is shown below, no critical components .



## Step 2: The PCB

- I have made the PCB using WinQcad Software it's easy and has a nice autorouting feature. Please download the PDF document which contains the true scale dimensions.

You will see two files :

PCB.pdf and PCB\_copper\_pour.pdf

the second one has a "mass copper pour" to save your etching solution and to speed up the etching process without affecting your tracks.

- I used the Toner Transfer method draw the tracks, i can say the output is nice. I have included the steps required to make PCB in the following steps.

### File Downloads



**PCB.PDF** ((198x112) 14 KB)

[NOTE: When saving, if you see .tmp as the file ext, rename it to 'PCB.PDF']

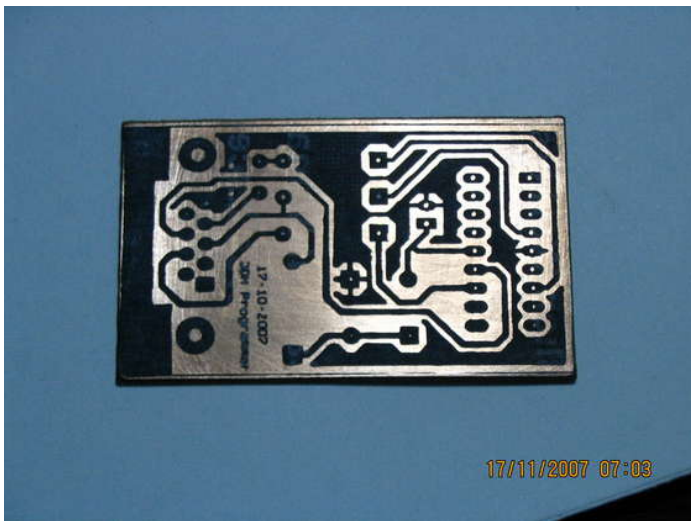


**PCB\_copper\_pour.PDF** ((198x112) 39 KB)

[NOTE: When saving, if you see .tmp as the file ext, rename it to 'PCB\_copper\_pour.PDF']

## Step 3: Toner Still on the PCB

This output from the Ironing process, you can see the black toner tracks, the paper has been removed using a tooth brush.



## Step 4: Etching

The PCB is then inserted in the Etching solution, i used Ferric chloride it's cheap in my country.

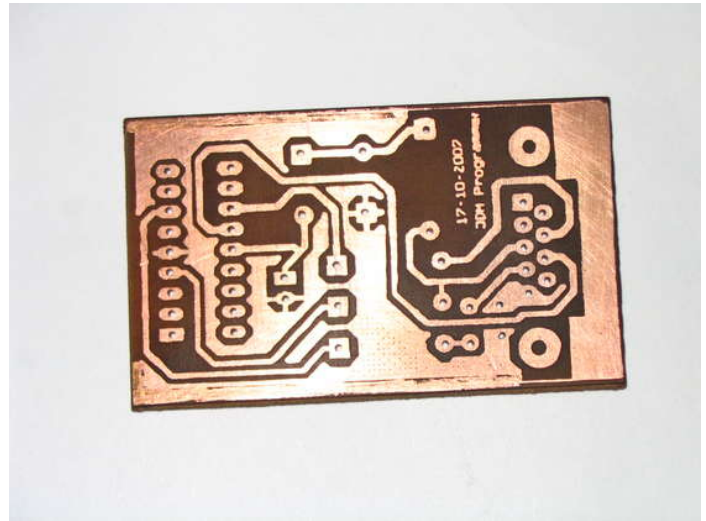
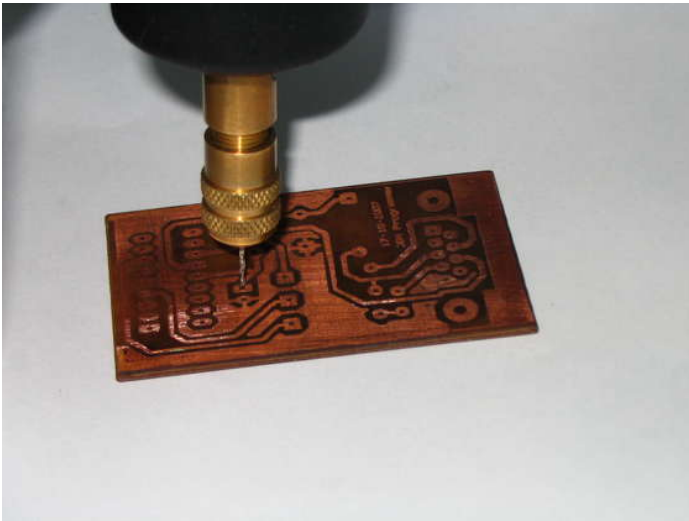
Be careful it's a toxic material don't do this step in your kitchen.

Actually i did, but my wife wasn't there :)



## Step 5: Final PCB

I used acetone to remove the toner, then it's ready to drilled.

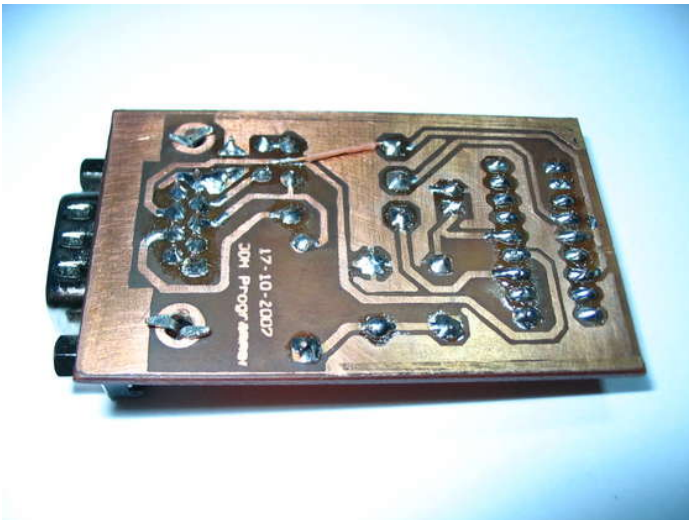


## Step 6: Soldering

The components are soldered.

Note the brown wire, i have made a mistake when routing the PCB in WinQcad, don't worry it's corrected in the attached pdf files.

Notice the drawings on the component side, it's a guide when placing the components in case it's a big project :-)



## Related Instructables



**LED Binary Clock** by ElevenOf9



**led matrix project using shift register and pic16f628a micro** by mansman



**Robotic arm controlled by NES gamepad** by brunoiip



**Christmas Led Tree(hapy new year 2011)** (video) by macobt



**Binary Clock** (video) by macobt



**Single Digit clock** (video) by macobt





**bubble\_gum\_chewing\_gum** says:  
english please

Nov 5, 2008. 7:25 PM [REPLY](#)



**Johnny C.** says:  
It seems that he want to add a LED

Nov 11, 2009. 12:53 PM [REPLY](#)



**newbie life5** says:  
said somethind about adding an led to make sure it working good idea how would you?

Feb 22, 2009. 7:43 PM [REPLY](#)



**bubble\_gum\_chewing\_gum** says:  
thanks. that sounds better.= )

Nov 19, 2009. 4:57 PM [REPLY](#)



**ivaneducardo747** says:  
Yeah, sonds like that...

Nov 5, 2009. 11:46 AM [REPLY](#)



**obie87** says:  
hi, i want to know if this Programmer can program PIC 16LF628A, Thanks

Aug 8, 2010. 4:49 PM [REPLY](#)



**bubble\_gum\_chewing\_gum** says:  
u can try it. as long as it have same number of pins and same pin config like 16f84 (pin 04 05 12 13 14) then it will work. <--- based on my theory. but never been tested to this. share if it will work.

Jan 29, 2011. 12:26 PM [REPLY](#)



**chathura\_tact** says:  
Can I Use 1N4007.... for 1N4148...?

Jun 25, 2010. 8:58 PM [REPLY](#)



**bubble\_gum\_chewing\_gum** says:  
u need faster switching diode.

Jan 29, 2011. 12:23 PM [REPLY](#)



**jaimearar** says:  
you can't... 1n4007 is a rectifier diode and is slower than 1n4148. since the freq. of the circuit is high the 1n4007 will not work.

Sep 16, 2010. 1:32 PM [REPLY](#)



**mehdi89** says:  
hi. i got a laptop, WinPic program, breadboard, pic16F628A, some other small electronics and i want program it with my laptop. bubble gum you can send me the full circuit for that.

Apr 18, 2009. 8:05 AM [REPLY](#)



**bubble\_gum\_chewing\_gum** says:  
before anything else, your laptop should be running in windows xp or older OS. windows 98 is much preferred. with 500MHz processor and below. Ive tested it with 400MHz processor and it worked alright. when Ive used 1.3GHz, it consumes 1min to program just a blinking LED. how about your laptop?

Nov 19, 2009. 5:01 PM [REPLY](#)



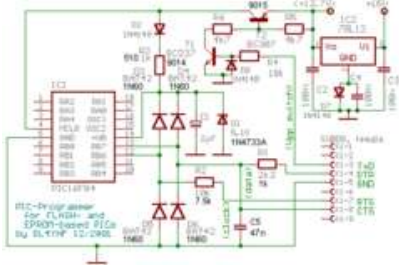
**mehdi89** says:  
Sorry for posting late. I have laptop. Operating system is windows vista. cpu doble core 2Ghz. ram 2Gb. i dont have any RS232 ports but i have a USB port. i also have USB to RS232 converter cable. so what do you think ? am i able to program my pic? ( i have 16f628A and 16f877A ) if yes then whic circuit should i use? the original or the second one that you posted in comments: breakthrough in JDM... ?














Oct 6, 2010. 1:01 PM [REPLY](#)



**bubble\_gum\_chewing\_gum** says:  
i'm late in posting too dude. well, u better use my last post coz its already tested to program mostly used pic. for ue Windows Vista OS, try installing another OS say winXP. use usb-to-serial port converter. use this image as ur reference circuit.

Jan 29, 2011. 12:22 PM [REPLY](#)



- 
- **frawtan** says:  
Hi!..i just wanna ask if this programmer can program PIC10F200 and PIC12F629?..  
thanks..=)
- Dec 4, 2010. 7:18 AM [REPLY](#)
- 
- **frawtan** says:  
Hi!..i just wanna ask if this programmer can program PIC10F200?..  
thanks..=)
- Dec 4, 2010. 7:09 AM [REPLY](#)
- 
- **newbie life5** says:  
whats the thing that sais 5.6V???
- Feb 25, 2009. 6:34 PM [REPLY](#)
- 
- **falseaddress** says:  
a zener diode
- Nov 17, 2010. 7:22 PM [REPLY](#)
- 
- **hal9000** says:  
One question before I start:  
Do I place the PIC in the socket **after** connecting the programmer to the serial port with the PC on, or **before** ?  
Does the order make a difference?  
Thanks for your help.
- Mar 20, 2009. 8:36 AM [REPLY](#)
- 
- **falseaddress** says:  
put it before connecting to pc
- Nov 17, 2010. 7:21 PM [REPLY](#)
- 
- **minchansike** says:  
When we building is end .. How to join whit compute ...  
What we need ....  
What Software must use to connect PC .
- Nov 3, 2010. 8:38 AM [REPLY](#)
- 
- **haoua** says:  
haoua says : programmer pic
- Oct 1, 2010. 5:49 AM [REPLY](#)
- 
- **mansman** says:  
Thanks alot This programmer works good with pic 16f628a I found another software programmer i it is very good winpic i exist in this link  
<http://www.ddrservice.net/download/Software/programmatrors/winpic800.zip.html>
- Aug 2, 2010. 4:05 AM [REPLY](#)
- 
- **gabrielG2** says:  
Made it on the prototype board and worked with 16F628 and with minor pin modifications with 16F630.
- Jun 9, 2010. 1:22 PM [REPLY](#)
- 
- **gabrielG2** says:  
But I used DL4YHF WinPic
- Jun 9, 2010. 1:24 PM [REPLY](#)
- 
- **idontcar3** says:  
can i use other diode than the 1n4148? i have some rectifiers.. like 1n40007 will it work?.. also.. how can i add a led to see if its working?
- Jun 4, 2010. 9:02 PM [REPLY](#)
- 
- **utak3r** says:  
Well, it DOES work! :) Thanks a lot, it's the easiest programmer for 16f628a I've ever seen.
- Apr 10, 2010. 2:47 PM [REPLY](#)
- 
- **tats3l** says:  
It doesn't work . And I tried whit the power supply, but still doesn't work, and the Author doesn't help you , and give advice .
- Apr 8, 2010. 1:36 PM [REPLY](#)
- 
- **GaRn** says:  
The schematic in your PDF doesn't match with with picture in "3 step"
- Feb 24, 2010. 10:01 AM [REPLY](#)
-



**cptbjorn** says:

Jan 14, 2010. 2:48 PM [REPLY](#)

I searched extensively and couldn't find a simple programmer that was verified working with 16f648a PICs. I built one from this schematic and it works great :)



**ahmed\_alshimary** says:

Jan 29, 2010. 1:05 PM [REPLY](#)

Hi I built too but it doesn't work, please could you tell me if you connect pin7 in PIC or not and does I need for special driver software



**omstar** says:

Jan 8, 2010. 10:58 AM [REPLY](#)

Sorry, but the resistor which is supposed to be 22 k doesn't match with the one shown in the PCB.(the color code is different). could anybody help me?



**redbird\_is** says:

Dec 17, 2009. 11:34 AM [REPLY](#)

The PCB appears different than the PDF of the mask you created. Specifically pins 4 and 5 - the routing & connections are different on your pcb



**delxsus** says:

Dec 14, 2009. 8:45 AM [REPLY](#)

The project has been tested with the following IC's :

PIC16f84A  
PIC16f628A



**wee\_man** says:

Nov 8, 2008. 1:59 PM [REPLY](#)

sorry for posting a thousand times but will this work for a 16f628a microcontroller?



**bubble\_gum\_chewing\_gum** says:  
definitely YES.

Nov 19, 2009. 5:13 PM [REPLY](#)



**J50Nunlimited** says:

Oct 26, 2008. 1:02 PM [REPLY](#)

wow this is a really nice and simple programmer! would PIC 16F877 supposedly work? thanks



**bubble\_gum\_chewing\_gum** says:  
it did not work with 16F877

Nov 5, 2008. 7:25 PM [REPLY](#)

[view all 131 comments](#)