

PICkit 3 Manual:

For this project we are using PICkit 3 to program the PICs.



Figure: PICkit 2 MCU Programmer/Debugger

- Connect PICkit 3 to the PC using the supplied USB cable.
- Pin 1 Marker designates the location of Pin 1.
- Programming connector (6-pin) connects to the target device.
- Status LEDs-
 1. Power(green)- power is supplied to the PICkit 3.
 2. Active(Blue)- PICkit 3 has connection to the PC USB port and the communication link is active.
 3. Status- Busy(yellow)- usually programming
Error(red)- error encountered.

Connections are made to the appropriate pins on the target device .

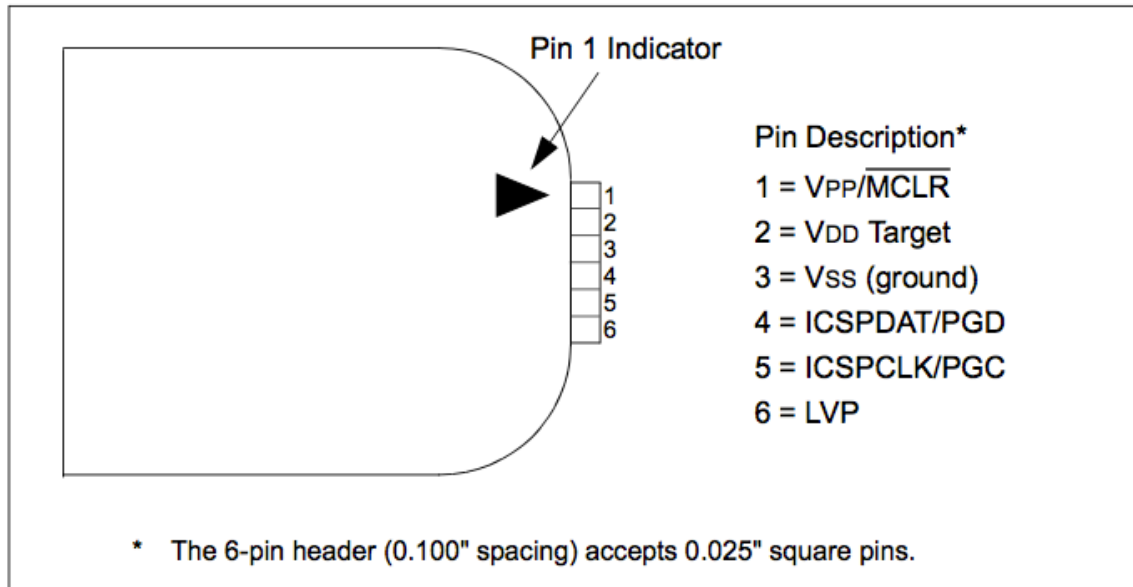
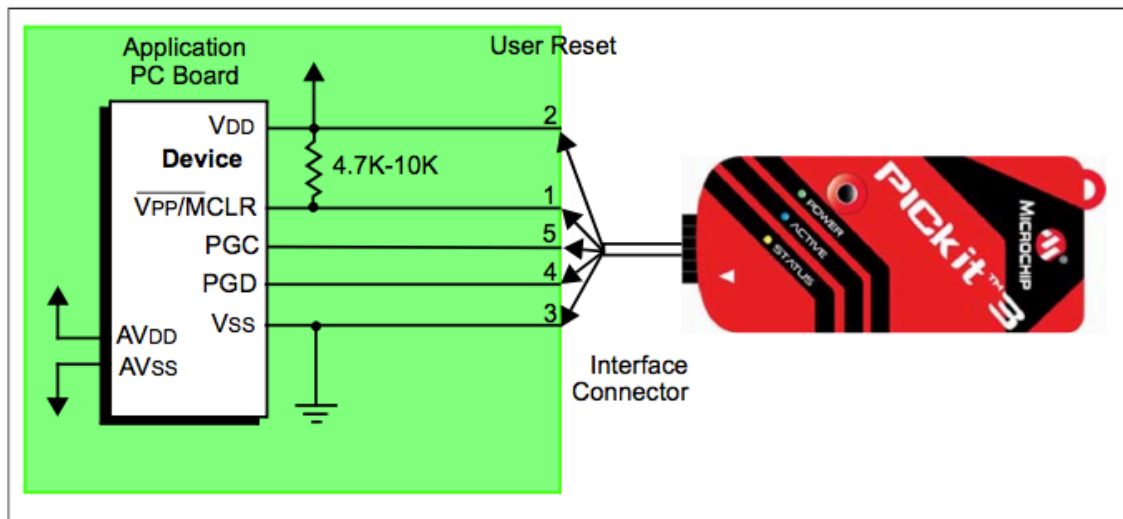


Figure: PICkit 3 Programmer connector pin out

***We turn off low voltage programming (LVP) so no connection is made to Pin 6.

The diagram shows the wiring from the connector to the target device. A pull-up resistor (around 10K Ω) is connected from V_{PP}/\overline{MCLR} line to V_{DD} so that the line may be strobed low to reset the device.



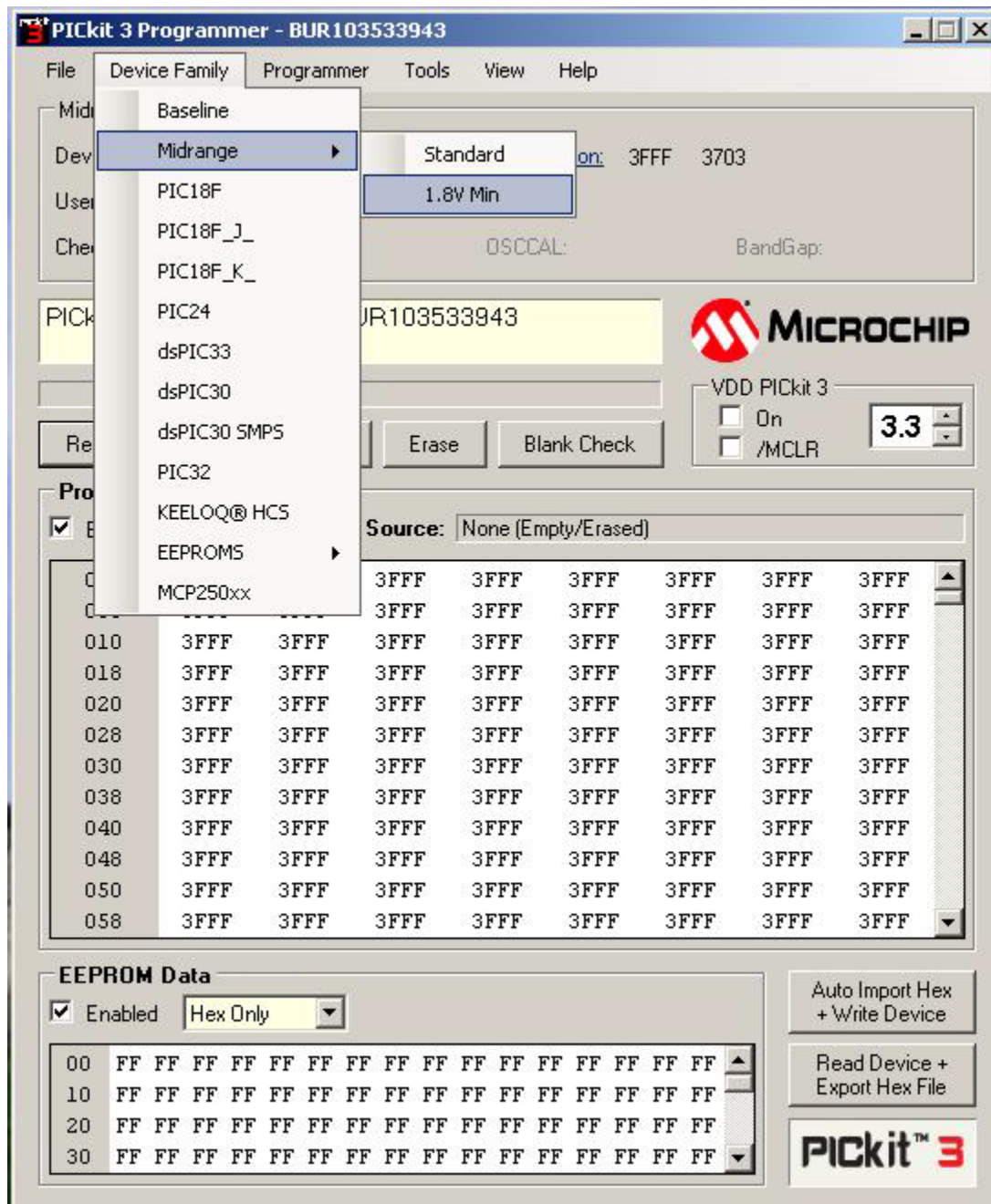
Loading Hex file into the PIC using PICKit 3

Open PICKit3.exe.

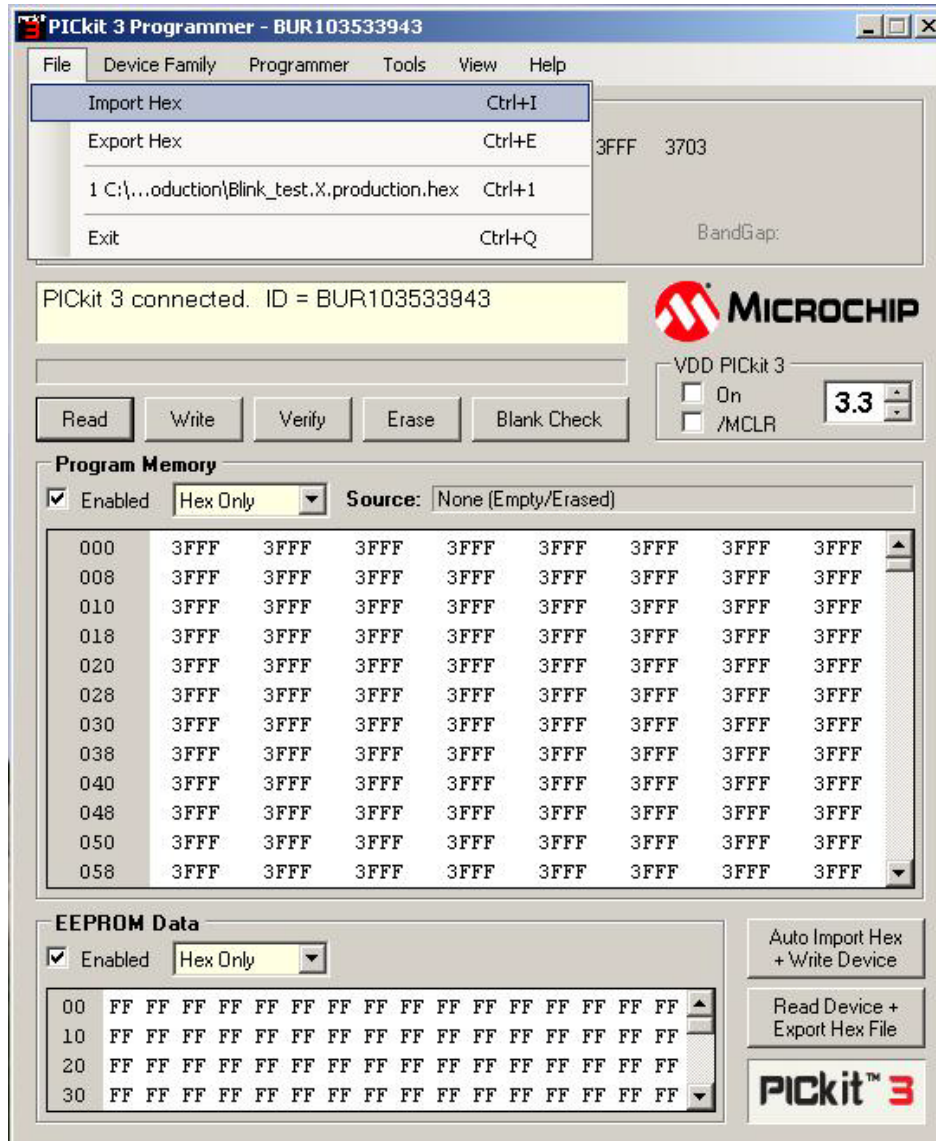
PICKit 3 can be downloaded from :

Step 1: Selecting the device.

Click on Device Family and select Midrange 1.8 V min.



Step 2: Click on File and select Import Hex.



Step 3: Browse to the folder containing the hex file.

PICkit 3 Programmer - BUR103533943

File Device Family Programmer Tools View Help

Midrange/1.8V Min Configuration

Device: PIC16LF1827 Configuration: 3FFF 3703

User IDs: FF FF FF FF

Checksum: 6702 OSCCAL: BandGap:

Midrange/1.8V Min device found.

Read Write Verify Erase Blank Check

Program Memory

Enabled Hex Only Source: None (Empty/Erased)

000	3FFF	3FFF	3FFF	3FFF	3FFF
008	3FFF	3FFF	3FFF	3FFF	3FFF
010	3FFF	3FFF	3FFF	3FFF	3FFF
018	3FFF	3FFF	3FFF	3FFF	3FFF
020	3FFF	3FFF	3FFF	3FFF	3FFF
028	3FFF	3FFF	3FFF	3FFF	3FFF
030	3FFF	3FFF	3FFF	3FFF	3FFF
038	3FFF	3FFF	3FFF	3FFF	3FFF
040	3FFF	3FFF	3FFF	3FFF	3FFF
048	3FFF	3FFF	3FFF	3FFF	3FFF
050	3FFF	3FFF	3FFF	3FFF	3FFF
058	3FFF	3FFF	3FFF	3FFF	3FFF

EEPROM Data

Enabled Hex Only

00	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
10	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
20	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
30	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

Read Device + Export Hex File

PICkit™ 3

Import Hex File

Look in: production

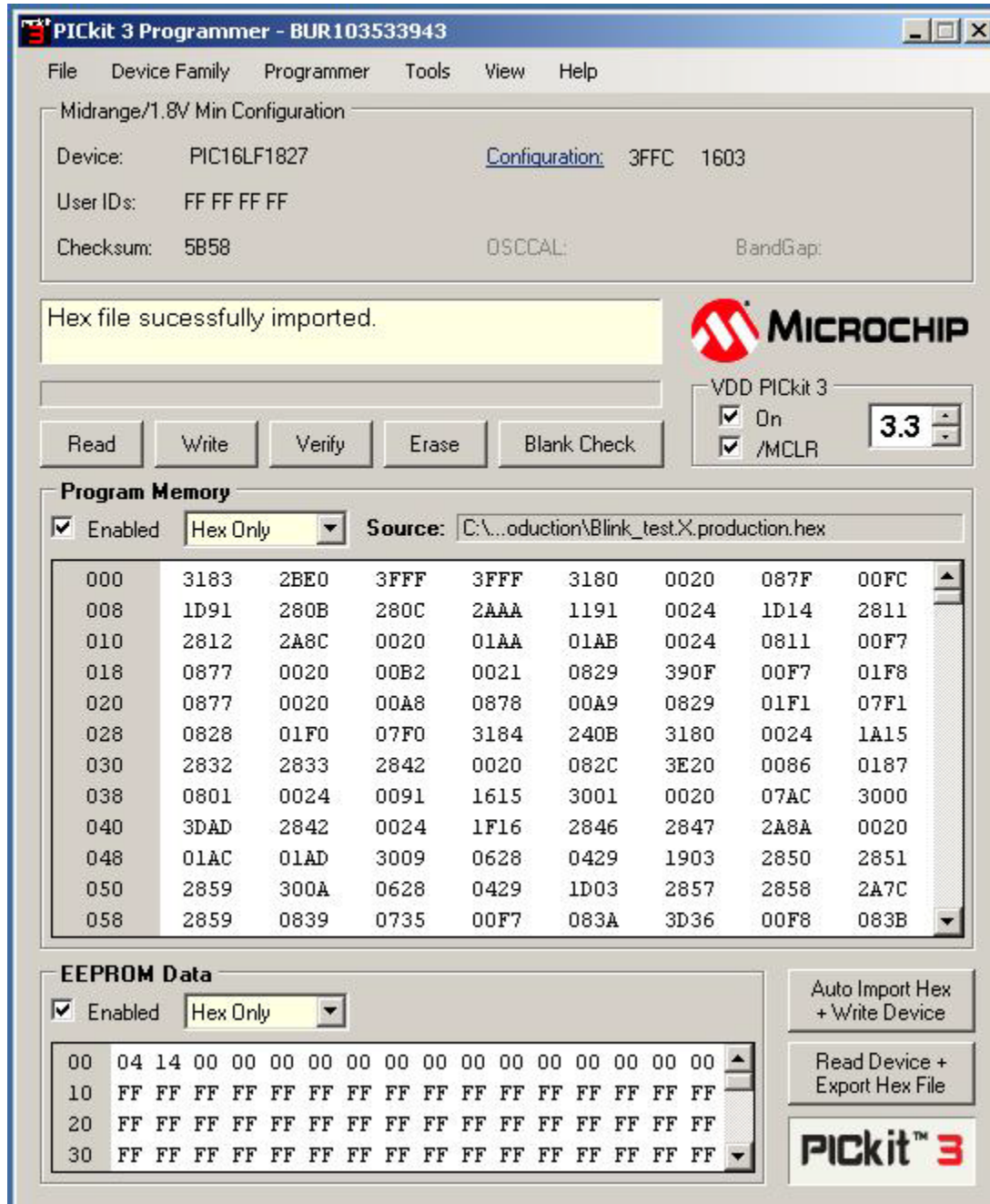
Blink_test.X.production.hex

File name:

Files of type: HEX files

Open Cancel

Step 4: Check the box on, and MCLR on the right hand side. Set the V_{DD} to be 3.3V.(Only needed when the PIC is powered from the PICKit 3. If using external power source, there is no need to do this step)



Step 5: Click on Write. On successful completion , the following screen should be displayed.

PICkit 3 Programmer - BUR103533943

File Device Family Programmer Tools View Help

Midrange/1.8V Min Configuration

Device: PIC16LF1827 Configuration: 3FFC 1603
User IDs: FF FF FF FF
Checksum: 5858 OSCCAL: BandGap:

Programming Successful.



VDD PICkit 3

- On
- /MCLR

3.3

Read Write Verify Erase Blank Check

Program Memory

Enabled Hex Only Source: C:\...oduction\Blink_test.X.production.hex

000	3183	2BE0	3FFF	3FFF	3180	0020	087F	00FC
008	1D91	280B	280C	2AAA	1191	0024	1D14	2811
010	2812	2A8C	0020	01AA	01AB	0024	0811	00F7
018	0877	0020	00B2	0021	0829	390F	00F7	01F8
020	0877	0020	00A8	0878	00A9	0829	01F1	07F1
028	0828	01F0	07F0	3184	240B	3180	0024	1A15
030	2832	2833	2842	0020	082C	3E20	0086	0187
038	0801	0024	0091	1615	3001	0020	07AC	3000
040	3DAD	2842	0024	1F16	2846	2847	2A8A	0020
048	01AC	01AD	3009	0628	0429	1903	2850	2851
050	2859	300A	0628	0429	1D03	2857	2858	2A7C
058	2859	0839	0735	00F7	083A	3D36	00F8	083B

EEPROM Data

Enabled Hex Only

00	04	14	00	00	00	00	00	00	00	00	00	00	00	00	00
10	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
20	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
30	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

Auto Import Hex + Write Device

Read Device + Export Hex File

PICkit™ 3