## **PICKit 3 General Programming instructions:**

1. PICKit 3 programmer software installation for use with the PICKit 3 hardware programmer.

1.1. Install the latest programmer software from the enclosed 'PICKit3\_programmer.zip' archive.

1.2. Connect the hardware PICKit 3 programmer to your PC and start the software: double click "PICkit3.exe" <u>Do not connect</u> the programming cable to a pcb yet.

PIC18F_K_(	configurati	Program	mmer I	ools Vi	ew Hel	p			
Device:	No Dev	rice Found		Config	uration: 0	000			
User IDs:	FF FF FI	FF							
Charles	0000								
Checksum:	0000			USCC.	AL:		вапосар:		
PICkit 3 co	nnecteo	1. ID = B	UR1210	95494		~	Mic	ROCI	HIF
Read	Write	Verify	Eras	e Bla	ank Check		D PICkit 3 On /MCLR	3,3	
Program M	emory Hex Or	lv 🔻	Source:	None (Er	notv/Erase	4)			
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010	FFFF	7777	FFFF	7777	FFFF	FFFF	7777	FFFF	
020	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
030	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
040	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
050	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
060	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
070	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
080	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
090	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
0A0	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	FFFF	
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EEPROM I	Data Hex On	ly 🔻					Au + '	to Import F Write Devi	-lex ice
							R	ad Device port Hex F	a + File

1.2.1. Tested compatibility OS:

- \* Windows XP SP, 32-bit with .NET 4.0 installed.
- \* Windows Vista, 32-bit with .NET 4.0 installed.
- \* Windows 7, 64-bit.

1.3. PICKit 3 Software Settings:

1.3.1. Goto "Programmer" and leave the 'Manual Device Select' Unchecked.

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No Devic F FF FF	Wr Ve	ite Devic	e					
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000	Era Bla	ise ink Chec	k			BandGap		
ected.	Ve Cle	rify on W ar Mem	/rite ory Buffer	s on Erase	2	VDD PICkit 3	CROCI	-11F
Vrite	Ale	ert Sound ite op Pl	e in Reset ls Chit Rutto			On /MCLR	3,3	•
ory	vvi	ite on Pr		1				
Hex Uniy	Ma	inual Dei	/ice Selec	t				
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1.3.2. Goto "Tools" and have the 'Fast Programming' checked.

PICkit 3 Pro	ogrammer	- BUR121	095494							X
File Devic	e Family	Program	nmer	Tools	View	Help	)			
PIC18F_K_0	Configuratio	n		En	able Co	de Pro	tect	Ctr	I+P	
Device:	No Dev	ice Found		En	able Da	ta Prot	ect	Ctr	I+D	
				0	SCCAL					
User IDs:	++ ++ ++	• ++		т.	ract VD	D Sour	~~			
Checksum:	0000			10	inger vo					
				Di	splay U	nimple	mented C	onfig B	its 🕨	
PICkit 3 co	nnected	I. ID = BI	JR12	Us	e VPP F	irst Pro	gram Ent	ry		thip
				Us	e LVP P	rogran	n Entry			
P.				✓ Fa	st Prog	ammii	ng			
Read	Write	Verify	E	U	ART Too	d				3 🌲
Program M	lemory			Lo	gic Too	l				
✓ Enabled	Hex On	ly 🔻	Sourc	CI	neck Co	mmun	ication			-
000	FFFF	FFFF	FFFF	Do	ownload	I PICkit	Operatin	g Syster	m	-
010	FFFF	FFFF	FFFF	Re	wert to		mode			7
020	FFFF	FFFF	FFFE				moue			1
030	FFFF	FFFF	FFFF	FFF	FF	FFF	FFFF	FFFF	FFF	F
040	FFFF	FFFF	FFFF	FFF	FF	FFF	FFFF	FFFF	FFF	F
050	FFFF	FFFF	FFFF	FFF		FFF	FFFF	FFFF	FFF	r F
070	FFFF	FFFF	TTTT TTTT		1 1 7 7		TTTT	TTTT TTTT		2 F
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090	FFFF	FFFF	FFFF	FFF	FF	FFF	FFFF	FFFF	FFF	F
0A0	FFFF	FFFF	FFFF	FFF	F F	FFF	FFFF	FFFF	FFF	F
080	FFFF	FFFF	FFFF	FFF	F F	FFF	FFFF	FFFF	FFF	F 🔻
EEPROM I	Data Hex On	y v							Auto Impo + Write D Read De Export He PICK	it Hex evice vice + ex File t <sup>™</sup> 3

1.3.3. Goto "Tools" and have the 'Target VDD Source  $\rightarrow$  Auto-Detect' checked.

🍟 PICkit 3 Pro	grammer	- BUR1210	095494							X
File Devic	e Family	Program	nmer	Tools	View	Help	D			_
PIC18F_K_(	Configuratio	n		Er	able Co	de Pro	tect	Ctrl+	0	
Device:	No Dev	ice Found		Er	able Dat	ta Prot	ect	Ctrl+[	)	
User IDec				0	SCCAL				Þ	
User IDs:		to Detect		Ta	raet VD	D Sour	re		•	
Checksum:	Y AL	DIGU:		Di	nger (D	imala	ee monted (	onfin Dite		
	Fo	rce PICkit			spiay or	imple	mented C	oning bits	,	
PICkit 3 co	Fo	rce Target		0	e VPP F	irst Pro	ogram Ent	iry		thip
				U:	e LVP P	rogran	n Entry			
<u></u>				✓ Fa	st Progr	ammii	ng			
Read	Write	Verify	E	U	ART Too	I				3 🚊
Program M	emory			Lo	gic Too	I				
✓ Enabled	Hex On	ly 🔻	Sourc	CI	neck Cor	mmun	ication			
000	FFFF	FFFF	FFFF	D	wnload	PICkit	t Operatin	a System		· •
010	FFFF	FFFF	FFFF	Re	vert to I		2 mode			7
020	FFFF	FFFF	FFFF	T.	vention		moue			8
030	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
040	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
050	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
060	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
070	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
080	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
090	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
0A0	FFFF	FFFF	FFFF	FFF	F FI	FFF	FFFF	FFFF	FFF	F
0B0	FFFF	FFFF	FFFF	' FFF	F Fl	FFF	FFFF	FFFF	FFF	F 🔻
EEPROM I	Data Hex On	ly –						Au + 1 Re Ex	to Impo Write D ead Der port He	rt Hex evice vice + ex File t <sup>™</sup> 3

## 2.0. PIC chip firmware Programming (uploading the hex to your pcb.)

2.1. Connect the programming cable to your pcb. Try without powering the pcb first.

2.2. Click 'Device Family' and choose the PIC family type.

- For the PIC18F25K20  $\rightarrow$  select 'PIC18F\_K\_'
- For the dsPIC33FJ256GP506  $\rightarrow$  select 'dsPIC33'
- For the PIC18F2520  $\rightarrow$  select 'PIC18F'

The chip should be detected now:

	ice Family	Program	nmer T	ools Vi	ew Hel	p		
dsPIC33C	onfiguration					F		
Device:	dsPIC3	3FJ256GP5	06	Config	uration: 0	0CF 00C	F 0007	00A7
User IDs:	FF FF FI	F FF			0	0C7 00D	F 00E7	00C3
Checksum	: 039C			OSCC/	AL:		BandGap:	
dsPIC33	device fo	und.				5	Mic	ROCHI
						VD	D PICkit 3	
Read	Write	Verify	Eras	e Bla	ank Check		] On ] /MCLR	3,3
-		, <u> </u>					,	
Program	Memory		_					
✓ Enable	Hex Or	ily 🔻	Source:	None (En	npty/Erase	d)		
00000	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF 4
00010	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00020	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00030	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00040	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00050	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
20000	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF	FFFFFF
00060								
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2.3. Open the hex file: click 'File' and 'Import hex' and select the hex file needed.

2.4. Choose 'Write' to upload to hex file to your pcb; will take around 4...30 seconds.

2.5. You should get the confirmation of correct programming. Done!

J256GP506 F	<u>Configurat</u>	ion: 00CF 00	CF 0007	0083
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		0006 00	4F 00E7	00C2
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ssful.			Mic	ROCHIF
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Source:	D:\ools\PIC	Ckit 3 Scripting\5	95_v043.hex	
00001 FFFFFF	OOCODA OO	OCODA OOCODA	A OOCODA	00C0DA 🔺
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OCODA OOCODA	OOCODA OO	0C0DA 00C184	00CODA	OOCODA
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			1 OOCODA	000100
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