1. Download a pickit2 programmer software from the following link (from list chose file 'PICkit 2 V2.61 Install A') <u>https://www.microchip.com/Developmenttools/ProductDetails/PG164120</u> You may use the direct link here:

http://ww1.microchip.com/downloads/en/DeviceDoc/PICkit%202%20v2.61.00%20Setup%20A.zip In case of problems with missing windows files chose from list file 'PICkit 2 V2.61 Install with .NET Framework A'. Here is the direct link to this file:

http://ww1.microchip.com/downloads/en/DeviceDoc/PICkit%202%20v2.61.00%20Setup%20dotNET %20A.zip

2. You will need zip file opener software to open file with pickit2 software. If you don't have any zip software already installed you can download one here: <u>https://www.winzip.com/win/en/zip-file.html</u> Download winzip software and install it.

- 3. Open pickit2 file (with zip opener) and install it. Follow installer instructions.
- 4. Connect USB cable to your computer and pickit2 programmer module.
- 5. Open pickit2 software. You should see window like the one below



6. From Programmer tab select 'verify on write', 'write on pickit button' and 'manual device select'

	e Family	Progra	mmer	Tools V	iew Hel	р		
Midrange/1.	8V Min Conf	R	ead Devic	e	Ctrl+R			
Device:	-Select P	V	/rite Devic	e	Ctrl+W			
User IDs:	FE FE FE	V	erify		Ctrl+Y	- 1		
		E	rase			- 1		
Checksum:	FC00	В	lank Chec	k		- 1	BandGap	
		v v	erity on W	inte	_		ZVWI	CROCHI
		c	lear Mem	ory Buffers	on Erase		DD PICkit :	2
		н	old Devic	e in Reset			🗌 On	5.0
Read	Write	Α	lert Sound	ls		- 1	MCLR	
Program M	lemory	✓ N	/rite on PI	Ckit Buttor	1			
✓ Enabled	Hex Only	- N	1anual De	vice Select				
000	3FFF	P	ICkit 2 Pro	grammer-	To-Go	F	3FFF	3FFF
008	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
010	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
018	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
020	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
028	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
030	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
038	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
040	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
048	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
050	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF
058	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF ·

7. Click on 'Select Part' button and select pocessor type: PIC16F1936

File Devi	ce Family	Progra	mmer T	ools V	iew Hel	p			
Midrange/1	8V Min Cor	figuration							
Device:	PIC12F	1822	•	Config	uration: 3	FFF 370	3		
User IDs:	PIC16F PIC16F	1824 1825	^	1					
Checksum:	PIC16F	1826		OSCC	AL:		BandGap:		
	PIC 16F	1827							
	PIC16F	1829	=						
	PIC16F	1847				2	MIC	ROCH	IP
	PIC 16F	1933				- 100			
	PIC16F	1936				VD			
Read	PIC16F	1937			ank Check			5,0	¥
House	PIC 16F	1938		\square	unit chook		JIMCEN		
Program N	ler PIC16F	1946		-					
Enabled	PIC16F PIC16F	1947 707	-	None (Er	mpty/Erased	d)			
000	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	^
008	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
010	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
018	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
020	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
028	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
030	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
038	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
040	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
048	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
050	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
058	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	Ŧ
	D-t-								
FEPROM		ly 👻					Au + 1	to Import He Nrite Device	e B
EEPROM Enabled	HEX OI				FF FF FF	FF FF	A Re	ad Device	+
EEPROM Enabled	TF FF FF	FF FF	FF FF FF	22 22					
EEPROM Enabled 00 FF 1 10 FF 1	TE FE FE	FF FF FF FF	FF FF FF FF FF FF	FF FF	FF FF FF	FF FF	Ex	port Hex File	9
EEPROM C Enabled 00 FF 1 10 FF 1 20 FF 1	FF FF FF	FF FF FF FF FF FF	FF FF FF FF FF FF FF FF FF	FF FF	FF FF FF FF FF FF	FF FF	Ex	port Hex File	•

8. Download hex file 6xZ566M_v10_1.hex and 6xZ566M_v10_2.hex

9. Click on File tab and select 'import hex'. Select folder with hex file $6xZ566M_v10_1$.hex and open

it. Status window should read 'Hex file sucessfully imported'

File Devi	ce Family	Program	nmer T	ools Vie	w Help)			
Impor	Hex	- 1			Ctrl+1				
Export	Hex				Ctrl+E	1030			
1.0	ft\nonraw	iony soft\6	x7566M v	10 2.HFX	Ctrl+1				
2 C:\	ft\popraw	iony soft\6	xZ566M v	10 1.HEX	Ctrl+2		andGan		
3.04	M\soft\6v	7566M v10	nonrawi	nny v2 HF	Ctrl+3		anuciap.		
4 C:\	\6xIN-12_1	.6F1826_02	_03_17+EE	PROM.he	Ctrl+4	~	Mici	ROCH	IP
Exit					Ctrl+Q		000+2		
		_					On On	5.0	
Read	Write	Verify	Erase	e Bla	nk Check		/MCLR	5,0	•
Program M	lemory					_			
Enabled	Hex On	y 🔹	Source:	C:\ft\pop	rawiony s	oft\6xZ566N	1_v10_2.HE	x	
0000	3188	28BC	3FFF	3FFF	3180	282E	000B	3400	*
8000	3401	3402	3404	3408	3410	3420	000B	34E7	
0010	34F3	34E3	34F7	34D3	34C7	34CB	34CF	34C3	
0018	34D7	34FF	000B	3405	3405	340A	340F	3414	
0020	000B	3400	341F	341C	341F	341E	341F	341E	
0028	341F	341F	341E	341F	341E	341F	0020	3180	
0030	1911	2838	3180	1812	2851	3180	1A13	2857	
0038	1111	0064	3181	211C	3181	1F3F	2176	3180	
0040	20D9	3181	2152	3180	2061	3180	1841	20C3	
0048	3181	213D	3185	25C0	3184	18BF	244B	3180	
0050	2860	1012	3180	1F3F	208B	3180	2860	1213	
0058	018D	303C	048E	128C	108C	100C	3180	2860	Ŧ
EEPROM	Data						Auto	o Import He	ex
Enabled	Hex On	y 🔻					+ V	Vrite Devic	e
	00 00 00	00 00 0	0 00 00	00 00 0	0 00 00	00 00 ^	Rea	ad Device	+
00 00	FF FF FF	FF FF F	F FF FF	FF FF F	F FF FF	FF FF	Ext	on nex H	e
00 00 10 FF									
00 00 10 FF 20 FF	FF FF FF	FF FF F	F FF FF	FF FF F	F FF FF	FF FF	DI	<u>^</u> ⊮;ŧ™	2

10. Connect programmer to selected pins (row of 6 pins) on clock board and press red button to flash hex code to clock processor. Programmer still needs to be connected to the computer.



11. Confirm that the code has been successfully flashed. Status window should change to green color and read 'programming successfull'.

PICkit 2 Pro	grammer	- PL							X
File Device	e Family	Program	nmer	lools V	iew Hel	p			
Midrange/1.8	V Min Cor	figuration		_					
Device:	PIC16F	1827	-	Config	uration: 3	F7F 3713			
User IDs:	FF FF FF	FF		Code	Protect				
Checksum:	7691			OSCC	AL:	E	landGap:		
Programmi	ng Suco	cessful.					Mic	ROCH	١P
						VDE	PICkit 2		
Read	Write	Verify	Eras	e B	ank Check		On /MCLR	5,0	*
Program Me	emory								
Enabled	Hex On	y 🔻	Source	None (Er	mpty/Erase	d)			
000	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	^
800	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
010	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
018	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
020	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
028	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
030	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
038	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
040	SFFF	3FFF	SEFE	SFFF	3FFF	3FFF	3FFF	SFFF	
048	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	3FFF	
050	3FFF	3rFF	3FFF	3FFF	3FFF	3FFF	SFFF	3FFF	
058	2225	21110	3222	21110	31116	31110	2225	2226	-
EEPROM D	ata								
Enabled	Hex On	y v					Aut + \	Vrite Devic	ex ce
00 FF F	F FF FF F FF FF	FF FF F	TE FE FE	FF FF	FF FF FF FF FF FF	FF FF	Re	ad Device port Hex F	+ le
20 FF F 30 FF F	F FF FF F FF FF	FF FF I	TE FE FE	FF FF FF FF	FF FF FF FF FF FF	FF FF	PI	Ckit [™]	2

12. connect power supply to the clock and check its operation. If the issue still repeats flash the processor with $6xZ566M_v10_2$.hex file.