

APPENDIX A

Programming (Code)

Writing programs using BASCOM-AVR is four programs in one package, it is known as an IDE (integrated development environment); it includes the Program Editor, the Compiler, the Programmer and the Simulator all together.

```
$regfile = "m16def.dat"
```

```
$crystal = 8000000
```

```
$baud = 1200
```

```
Config Com1 = Dummy , Synchron = 0 , Parity = None , Stopbits = 1 , Databits = 8 , Clockpol  
= 0
```

```
Config Lcd = 16 * 2
```

```
Config Lcdpin = Pin , Db4 = Portb.4 , Db5 = Portb.5 , Db6 = Portb.6 , Db7 = Portb.7 , E =  
Portb.2 , Rs = Portb.0
```

```
Enable Interrupts
```

```
Enable Urxc
```

```
On Urxc Display1
```

```
Dim S1 As String * 20
```

```
Dim S2 As String * 20
```

```
Dim S3 As String * 20
```

```
Dim S123 As String * 20
```

```
Dim S12 As String * 20
```

```
Dim S13 As String * 20
```

```
Dim S23 As String * 20
```

```
S1 = "El C 1"
```

```

S2 = "EL C 2"

S3 = "EI C 3"

S12 = "EI C 1 & C 2"

S13 = "EI C 1 & C 3"

S23 = "EI C 2 & C 3"

S123 = "EI C 1 & c 2 & c 3"

Config Pina.0 = Input

Config Pina.1 = Input

Config Pina.2 = Input

Cls

Lcd "GPS System and GSM"

Lowerline

Lcd "  GPS"

Waitms 1000

Dim S As String * 200

Dim Gps As String * 200

Dim O As String * 200

Dim Sr As String * 20

Dim Bt As Byte

Dim Pos As Integer

Cursor Off

Lcd "  READY"

Waitms 2000

Cls

S"" =

O = "32"

Sr = "AT+CMGS"=

```

```
Sr = Sr + Chr(&H22)

Sr = Sr + "0993708004"

Sr = Sr + Chr(&H22)

Print "AT"

Waitms 100

Cls

Lcd S

Waitms 1000

Print "ATE0"

Waitms 100

Cls

Lcd S

Waitms 1000

Print "AT+GMM"

Waitms 100

Cls

Lcd S

Waitms 1000

Print "AT+CMGF=1"

Waitms 100

Cls

Lcd S

Porta.0 = 0

Print "AT+CGPSPWR=1"

Waitms 1000

Print "AT+CGPSRST=1"

Waitms 1000
```

```

Print "AT+CGPSPWR=1"

Waitms 1000

S"" =

Do

If Pina.0 = 1 And Pina.1 = 1 And Pina.2 = 1 Then

  Cls

  Lcd "  READY"

  End If

If Pina.0 = 0 And Pina.1 = 1 And Pina.2 = 1 Then

  Print "AT+CGPSINF=32"

  Waitms 1000

  Pos = Instr(s , O)

  If Pos = 1 Then

    Pos = 0

    Cls

    Lcd S1

    Waitms 1000

    Print Sr

    Waitms 1000

    Print S

    Print S1

    Printbin &H1A

    Wait 8

    S"" =

    End If

  End If

If Pina.0 = 1 And Pina.1 = 0 And Pina.2 = 1 Then

```

```

Print "AT+CGPSINF=32"

Waitms 1000

Pos = Instr(s , O)

If Pos = 1 Then

    Pos = 0

    Cls

    Lcd S2

    Waitms 1000

    Print Sr

    Waitms 1000

    Print S

    Print S2

    Printbin &H1A

    Wait 8

    S"" =

    End If

End If

If Pina.0 = 1 And Pina.1 = 1 And Pina.2 = 0 Then

Print "AT+CGPSINF=32"

Waitms 1000

Pos = Instr(s , O)

If Pos = 1 Then

    Pos = 0

    Cls

    Lcd S3

    Waitms 1000

    Print Sr

```

```

Waitms 1000

Print S

Print S3

Printbin &H1A

Wait 8

S"" =

End If

End If

If Pina.0 = 0 And Pina.1 = 0 And Pina.2 = 1 Then

Print "AT+CGPSINF=32"

Waitms 1000

Pos = Instr(s , O)

If Pos = 1 Then

Pos = 0

Cls

Lcd S12

Waitms 1000

Print Sr

Waitms 1000

Print S

Print S12

Printbin &H1A

Wait 8

S"" =

End If

End If

If Pina.0 = 0 And Pina.1 = 1 And Pina.2 = 0 Then

```

```

Print "AT+CGPSINF=32"

Waitms 1000

Pos = Instr(s , O)

If Pos = 1 Then

    Pos = 0

Cls

Lcd S13

Waitms 1000

Print Sr

Waitms 1000

Print S

Print S13

Printbin &H1A

Wait 8

S"" =

End If

End If

If Pina.0 = 1 And Pina.1 = 0 And Pina.2 = 0 Then

Print "AT+CGPSINF=32"

Waitms 1000

Pos = Instr(s , O)

If Pos = 1 Then

    Pos = 0

Cls

Lcd S23

Waitms 1000

Print Sr

```

```

Waitms 1000

Print S

Print S23

Printbin &H1A

Wait 8

S"" =

End If

End If

If Pina.0 = 0 And Pina.1 = 0 And Pina.2 = 0 Then

Print "AT+CGPSINF=32"

Waitms 1000

Pos = Instr(s , O)

If Pos = 1 Then

Pos = 0

Cls

Lcd S123

Waitms 1000

Print Sr

Waitms 1000

Print S

Print S123

Printbin &H1A

Wait 8

S"" =

End If

End If

Loop

```

Display1:

Inputbin Bt

If Bt <> &H0A Then

If Bt <> &H0D Then

S = S + Chr(bt)

End If

End If

Return