LAMPIRAN A

LISTING PROGRAM

Module Visual Basic

```
Public bolCetakMasuk As Boolean
Public bolCetakKeluar As Boolean

Public lHargaIni As Long
Public sNamaIni As String
Public sAlamatIni As String
Public sAntriIni As String


Public Function TextTanpaSpasi(sText As String) As String
Dim i As Integer
Dim sChar As String
Dim sNoSpasi As String

i = 1
Do While i <= Len(sText)
  sChar = Mid(sText, i, 1)
  If sChar <> " " Then
    sNoSpasi = sNoSpasi & sChar
  End If
  i = i + 1
Loop
TextTanpaSpasi = sNoSpasi
End Function

Public Function TextTigaDigit(iAngka As Integer) As String
Select Case Len(iAngka)
Case 1
  TextTigaDigit = "00" & iAngka
Case 2
  TextTigaDigit = "0" & iAngka
Case 3
  TextTigaDigit = iAngka
End Select
End Function

Public Sub CetakMasuk(sWaktu As String, sNoPolisi As String)
Printer.Print sNamaIni
Printer.Print sAlamatIni
Printer.Print "**************************"
Printer.Print "No. Polisi  : " & sNoPolisi
Printer.Print "Waktu Masuk : " & sWaktu
Printer.EndDoc
```

```
bolCetakMasuk = True
End Sub

Public Sub CetakKeluar(sWaktu1 As String, sWaktu2 As String, sNoPolisi As String, sngTarif As Single)
Printer.Print sNamaIni
Printer.Print sAlamatIni
Printer.Print "**************************"
Printer.Print "No. Polisi  : " & sNoPolisi
Printer.Print "Waktu Masuk : " & sWaktu1
Printer.Print "Waktu Keluar : " & sWaktu2
Printer.Print "Tarif Parkir : " & sngTarif
Printer.EndDoc
bolCetakKeluar = True
End Sub

Public Function JumlahDetik(dblWaktu1 As Double, dblWaktu2 As Double) As Long
JumlahDetik = CLng((dblWaktu2 - dblWaktu1) * 86400) 'detik
End Function

Public Function JumlahHarga(lDetik As Long, lHarga As Long) As Single
Dim iJam As Integer
Dim iDetik As Integer

iJam = lDetik \ 3600
iDetik = lDetik Mod 3600
If iDetik <> 0 Then
  JumlahHarga = (iJam + 1) * lHarga
Else
  JumlahHarga = iJam * lHarga
End If
End Function

Public Function GetItem(sIniPath As String, sItem As String) As String
Dim iFile As Integer
Dim sFile As String
Dim sResult As String
Dim sLine As String
Dim bSucces As Boolean

sErrMessage = ""
On Local Error GoTo ErrHandleGetItem
    sFile = Dir(sIniPath)
    If sFile = "" Then
        sErrMessage = "App.ini file not found"
```

```
        Exit Function
    End If
    iFile = FreeFile
    Open sIniPath For Input As #iFile
    Do While Not EOF(iFile)
        Line Input #iFile, sLine
        sResult = Left(sLine, InStr(sLine, " = ") - 1)
        If sResult = sItem Then
            bSucces = True
            Exit Do
        End If
    Loop
    If bSucces Then
        'DBPath = 'xxxx'
        sResult = Right(sLine, Len(sLine) - (InStr(1, sLine, "=") + 1))
        GetItem = sResult
    Else:
        sErrMessage = "Item not found"
    End If
    Close #iFile
Exit Function
ErrHandleGetItem:
    MsgBox Err.Description, vbCritical, "Get Item Error"
End Function
```

Assembler

```
$mod51
;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
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;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~
;Pengambilan Gambar Dengan Kamera Digital Dan
;Pencetak Karcis Parkir Untuk Perparkiran Mobil
;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~
;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~~~~~~~~~~~~~~~~~~~
; H/W : - Modul AT89C51
;         - Modul Serial RS 232
;         - Trafo CT
;         - Modul motor driver 2 buah
;         - mekanik gerbang 1 buah
;----------------------------------------

flag_           equ     30h

;----------------------------------------
        org 0000h
        ajmp start

                org 0023h
                ajmp rs232

;----------------------------------------
                org 0030h
;----------------------------------------
rs232:          push acc
                push psw
                jb ri,search
                ajmp int_x
search:         mov a,sbuf
                cjne a,#'1',next1       ;
                mov flag_,#'1'
                ajmp int_x
next1:          cjne a,#'2',next2
                mov flag_,#'2'
                ajmp int_x
next2:          cjne a,#'3',next3
                mov flag_,#'3'
```

```
                ajmp int_x
int_x:          clr ri
                pop psw
                pop acc
                reti

;--------------------------------
send:           jnb ti,$
                clr ti
                ret

;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
;       Program begin here
;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
start:          mov scon,#50h
                mov th1,#0fdh
                mov tmod,#21h
                setb tr1
                setb ea
                setb es
                clr ri
                clr ti
                acall gate1_turun

;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
;       main program
;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
oo:             setb p3.7
                jb p1.6, select0                ; gate
                ;acall delay_10ms
                mov sbuf,#'#'
                acall send
                ;mov r0,#111
select0:        acall select_gate
                ajmp oo

;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
;       select condition
;~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
select_gate:    mov a,flag_
```

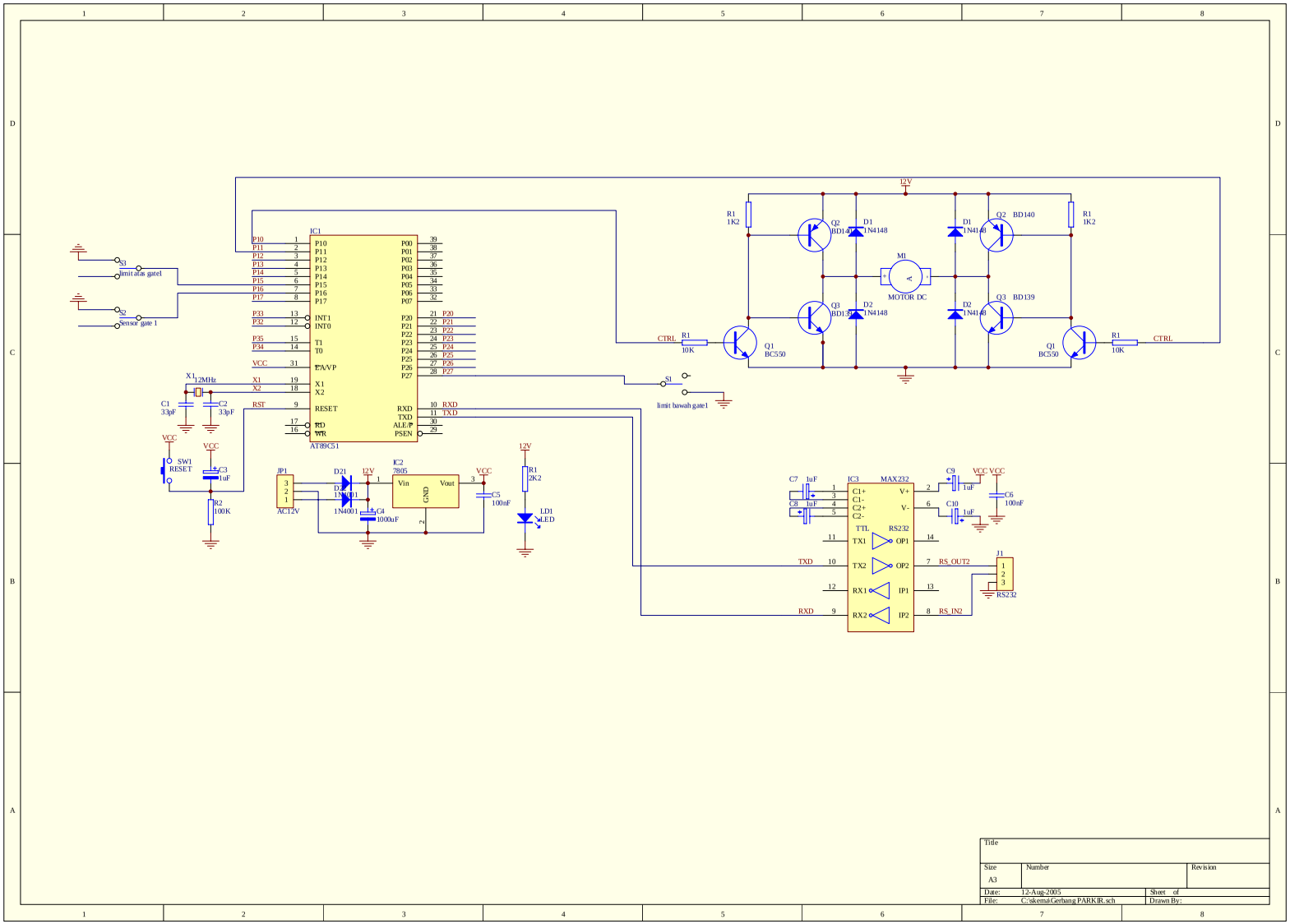
```
                cjne a,#'1',go0
                acall naik_gate
                mov flag_,#'0'
go0:            cjne a,#'2',go1
                acall turun_gate
                mov flag_,#'0'
go1:            ret

;-------------------------------------------------
naik_gate:      cpl p3.7
                mov sbuf,#'.'
                acall send
                acall delay_10ms
                mov sbuf,#'a'
                acall send

naik_gate10:    acall motor_gate1_naik
                jb p1.5,naik_gate10
                acall motor_off1
                mov sbuf,#'A'
                acall send
                acall delay_10ms
                mov sbuf,#'.'
                acall send
                cpl p3.7
                ret

turun_gate:     cpl p3.7
                mov sbuf,#'.'
                acall send
                acall delay_10ms
                mov sbuf,#'A'
                acall send

turun_gate11:   acall motor_gate1_turun
                jb p2.7,turun_gate11
                acall motor_off1
                mov sbuf,#'a'
                acall send
                acall delay_10ms
                mov sbuf,#'.'
                acall send
                ret

;---------------------------------
motor_off1:
```

```
                clr p1.2
                clr p1.3
                ret

motor_gate_turun:
                setb p1.3
                clr p1.2
                ret

motor_gate_naik:
                setb p1.2
                clr p1.3
                ret


gate_close:     jb p2.6,gate_close
                acall motor_off
                jb p2.7,gate_close
                acall motor_off1
                cpl p3.7
                mov sbuf,#'c'
                acall send
                acall delay_10ms
                mov sbuf,#'.'
                acall send
                ret


;---------------------------------------------
;                   DELAY
;---------------------------------------------
Delay_10mS:     push            acc
                push            b
                mov             a,#20
Delay10mSLoop:          mov             b,#230
                djnz            b,$
                djnz            acc,Delay10mSLoop
                pop             b
                pop             acc
                ret



;---------------------------------------------
; End Program
;---------------------------------------------
```

end

LAMPIRAN B

SKEMA LENGKAP RANGKAIAN


IC1
AT89C51
P10
P11
P12
P13
P14
P15
P16
P17
P00
P01
P02
P03
P04
P05
P06
P07
P20
P21
P22
P23
P24
P25
P26
P27
INT1
INT0
T1
T0
EA/VP
X1
X2
RESET
RD
WR
RXD
TXD
ALE/P
PSEN
VCC
RST
X1
12MHz
C1
33pF
C2
33pF
SW1
RESET
C3
1uF
R2
100K
S3
limit atas gate1
S2
sensor gate 1
S1
limit bawah gate1
12V
R1
1K2
Q2
BD140
D1
1N4148
M1
MOTOR DC
Q3
BD139
D2
1N4148
CTRL
R1
10K
Q1
BC550
JP1
AC12V
D21
1N4001
C4
1000uF
IC2
7805
Vin
Vout
GND
C5
100nF
LD1
LED
IC3
MAX232
C7
1uF
C8
1uF
C9
1uF
C10
1uF
C6
100nF
C1+
C1-
C2+
C2-
V+
V-
TTL
RS232
TX1
TX2
RX1
RX2
OP1
OP2
IP1
IP2
TXD
RXD
RS_OUT2
RS_IN2
J1
RS232
Title
Size
A3
Number
Revision
Date:
12-Aug-2005
Sheet of
File:
C:\skema\Gerbang PARKIR.sch
Drawn By:

LAMPIRAN C

FOTO MINIATUR PERPARKIRAN

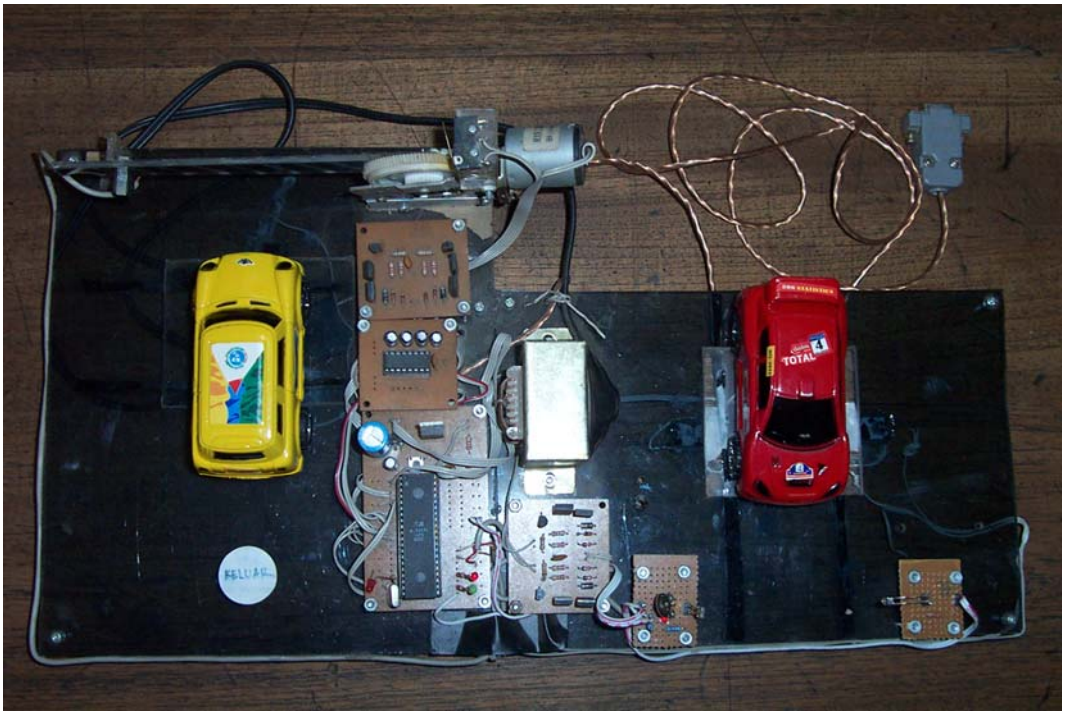


Foto Alat Tampak Atas

Foto Alat Tampak Depan

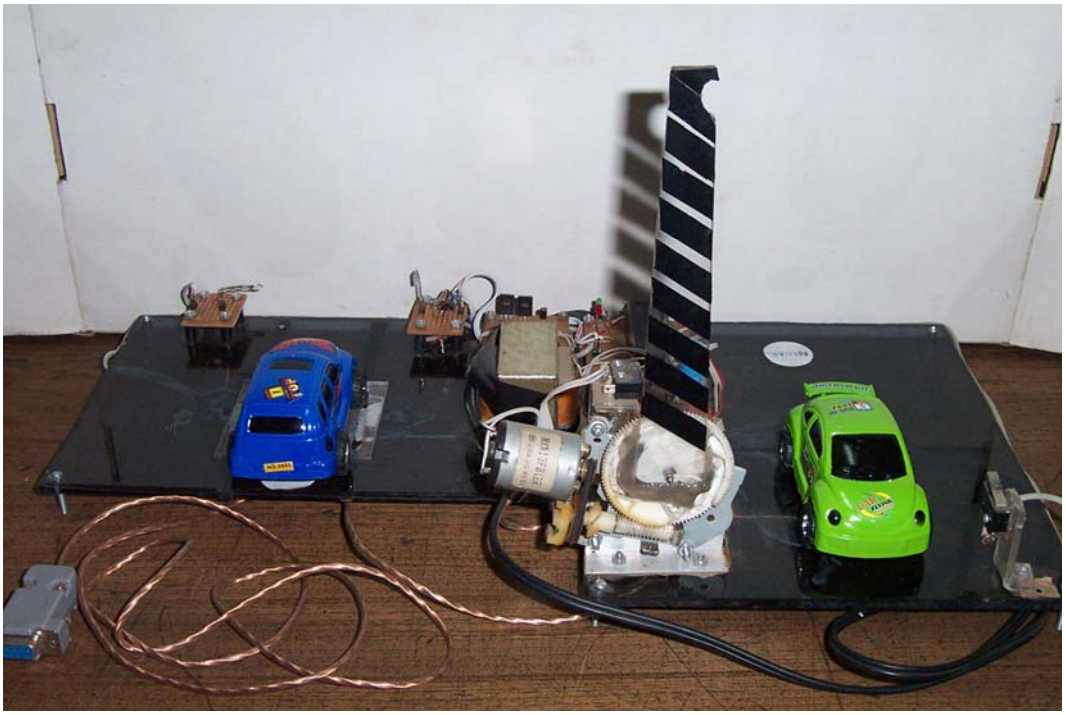


Foto Alat Tampak Pintu Keluar