

A transmissão é assíncrona sem envio de bit de paridade à taxa de 9600 bauds (kibi/s)

```
RESET EQU 00H
LTSERIAL EQU 23H ; local tratador
STATE EQU 20H
```

```
ORG RESET ;PC=0 depois de reset
JMP INICIO

ORG LTSERIAL
CLR TI
MOV STATE,#1H
RETI
```

```
INICIO: MOV IE,#10010000B
        MOV SCON,#01000000B
        MOV TMOD,#00100000B
        MOV TH1,#0FDH
        MOV TL1,#0FDH
        MOV PCON,#0H
        SETB TR1

        MOV STATE,#0H
        MOV R0,# STATE
        MOV DPTR,#TABELA
        MOV R1,#1
        MOV SBUF,#'M'
```

```
VOLTA: CJNE @R0,#1,VOLTA
        MOV STATE,#0H
        MOV A,R1
        MOVC A,@A+DPTR
        MOV SBUF,A
        INC R1
        CJNE R1,#16,VOLTA
        CLR TR1
        JMP $
```

```
TABELA: DB 'Microcontrolador'
        END
```

IE

EA	--	--	ES	ET1	EX1	ET0	EX0
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EA = 1, enable interrupt; demais bits: enable/disable serial interrupt (ES), timer 1 & 0 overflow interrupt (ET1 & ET0); external interrupt (EX1 & EX0).

SCON

SM0		SM1	SM2	REN	TB8	RB8	TI	RI
SM0	SM1	Mode	Operation	Baud rate				
0	0	0	Shift register	Osc/12				
0	1	1	8-bit UART(8-bit data, 1 start bit, 1 stop bit.)	Set by timer (variable)				
1	0	2	9-bit UART	Osc/12 or Osc/64				
1	1	3	9-bit UART	Set by timer (variable)				

SM2: multiprocessor comm; REN: 1 = Rx data in RxD pin; TB8 9th tx bit; RB8 9th rx bit; TI: 1 = 8051 has finished sending SBUF; RI: 1 = 8051 has received data in SBUF.

TMOD

Gate		C/T	M1	M0	Gate		C/T	M1	M0
0	0	0	13-bit timer mode. THX with TLx as 5-bit prescaler			M0	Timer mode selection bit (see below)		
0	1	1	16-bit timer mode. 16-bit timer/counter without prescaler			M1	Timer mode selection bit (see below)		
1	0	2	8-bit auto reload. THx contains a value that is to be loaded in to TLx each time it overflows			C/T	Timer or Counter selector. Cleared for Timer operation (input from internal system clock). Set for counter operation (input from Tx input pin). If 0, timer is used as delay generator. If 1, timer is used as event counter. If 1, timer x is clocked from Tx pin. If 0, timer x is clocked from oscillator/12		
1	1	3	Split timer mode. (Timer 0) TLO is an 8-bit timer/counter controlled by the standard Timer 0 control bits, TH0 is an 8-bit timer and controlled by Timer 1 control bits. (Timer 1) Timer/counter 1 stopped			TR	This bit is used to start/stop timers by hardware. If 1, the timers can be started/stopped by the external sources. If 1, timer x is enabled when intx is		

PCON

SMOD	--	--	--	GF1	GF0	PD	IDL
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SMOD: baudrate = clock in Hz / N * (256 – TH1)
If SMOD = 0, then N = 384, else N = 192.

TCON

TR1 = 1, start timer 1 TR0 = 1, start timer 0

TF1	TR1	TF0	TR0	IE1	IT1	IE0	IT0
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