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How do you know if a character has been received, or if the 8251 is ready to transmit? After a RESET and COMMAND, address

16383 will provide a status. You can find out the communication status by knowing the bits for this mode:

BIT 1 READY TO TRANSMIT WHEN 1 (HIGH)

BIT 2 CHARACTER RECEIVED WHEN 1 (HIGH)

In BASIC you cannot check these bits easily, so, maybe you would prefer a machine code routine to do this.

LD A, (16383)	58	LD A, (16383)	58
	255		255
	63		63
AND 1	230	AND 2	230
	1		2
JR Z,-7	40	JR Z-7	40
	249		249
RET	201	RET	201

wait until ready to transmit	wait for a received character
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In machine code, ANDing has the same effect as a typical logic gate where you AND logic 1 with a bit.



ANDing bit 1 will produce a high on the output only when the bit is high (logic 1). In this manner, we can test individual bits of an entire byte.

Let's say the routine to wait for a received character began at 16514. And let's say you were talking directly with another TIMEX MODEM and needed no ASCII conversion. That is, A TS-1000 with a BYTE BACK MODEM IN ORIGINATE, and the host TS-1000 with a a BYTE BACK IN ANSWER mode. You could communicate directly with a simple program:

```

5 RAND USR 16514
10 PRINT CHR$ PEEK 16382
15 GOTO 5

```

Here the host would wait for a new received character. When one is received, it gets printed onto the screen.

The originate computer's program may have the "wait until ready" machine code at address 16525. His program would go something like this:

```

5 IF INKEY$="" THEN GOTO 5
10 LET A$=INKEY$
15 RAND USR 16525
20 POKE 16382, CODE A$

```

Those of you keeping up with me may already be thinking of upload/download through BASIC. I suppose you could move RAMTOP down, download a program in this fashion above RAMTOP. But, I'm not sure how to recover it without losing the stackpointer, variables, screen, etc. It would be tricky, but you could try. TO SEND the entire program you could have a program like this:

```

5 LET A=PEEK 16404+256*PEEK 16405
10 FOR N=16509 TO A
15 RAND USR 16525
20 POKE 16382, PEEK N
25 NEXT N

```

Very simply, this would send all data in the BASIC area of RAM to the host. I have not tried these routines in BASIC, but have connected the TS-2068 and TS-2050 directly to the TS-1000 and BYTE BACK MODEM with successful transfer of data. The MODEM works at 250 baud and there is no reason one could not develop communication software in BASIC. Clever programmers might try experimenting.

SUMMARY:

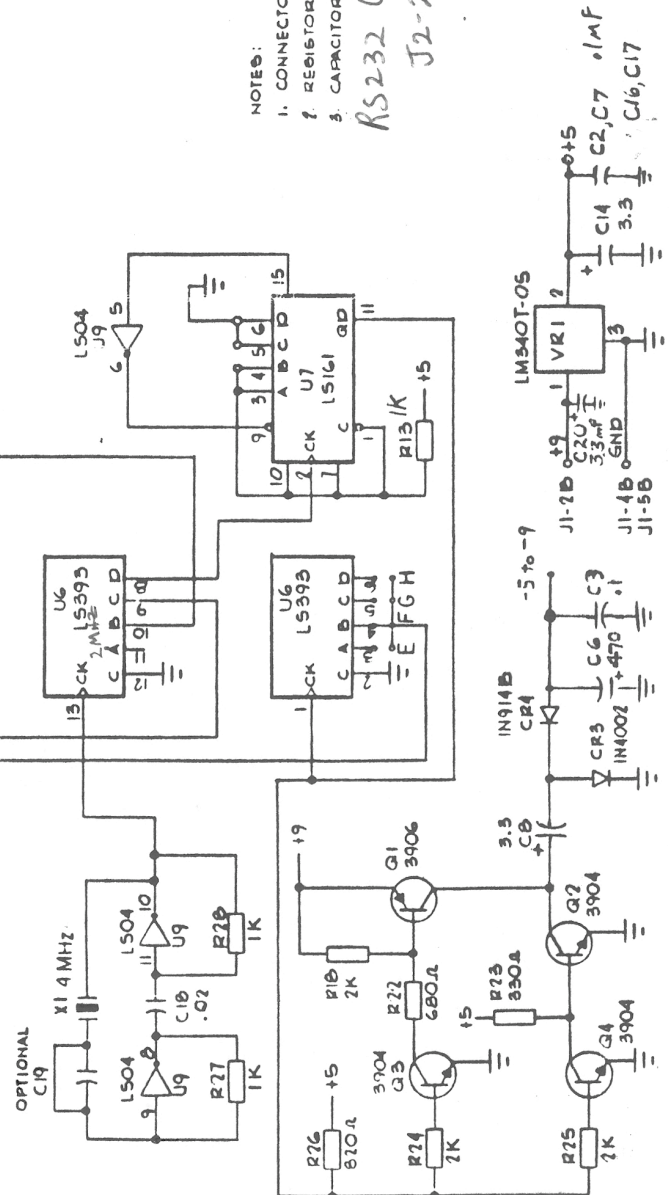
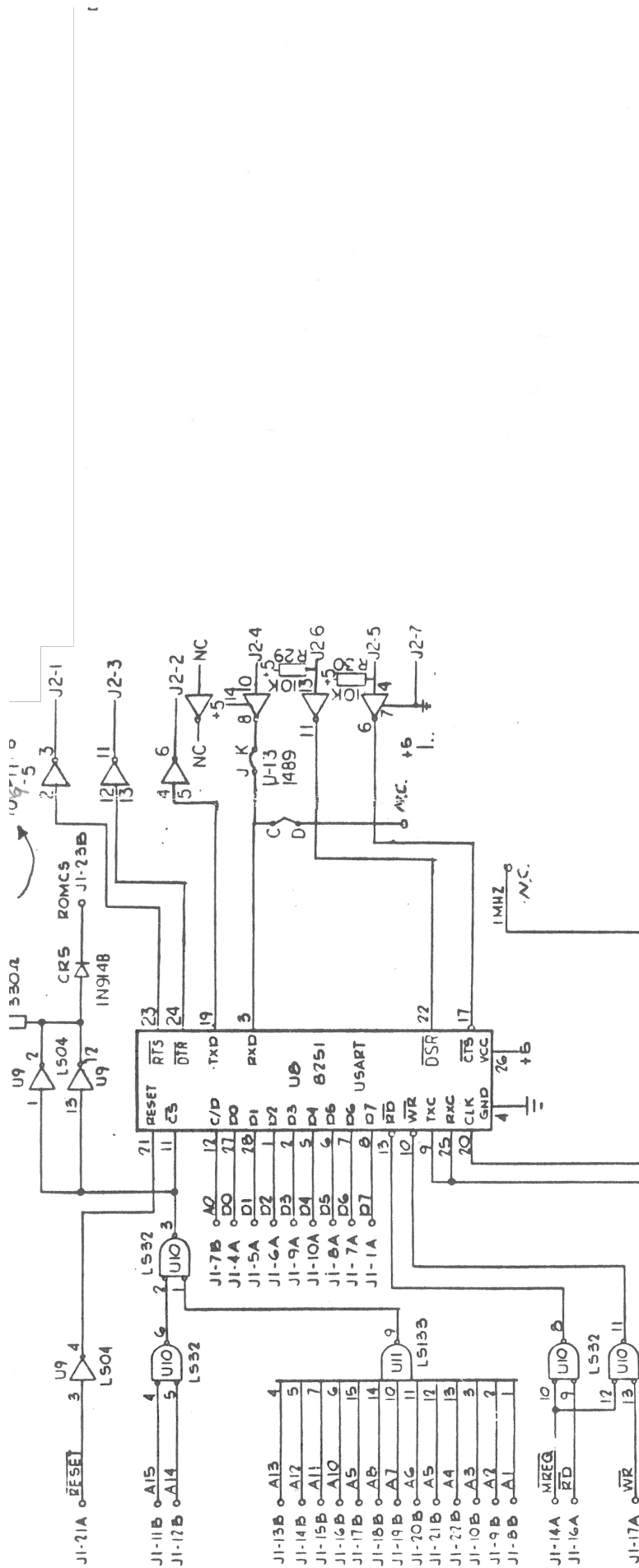
16383, 64 ; RESET

16383, 78 ; COMMAND
- 8N1

16383, 22 ; CONDITION
FLANK/EMABUOT

SEND/REC DATA VIA 16382

16404: E_LINE



NOTES:
 1. CONNECTOR J1 HAS IDENTICAL CONNECTIONS FRONT & BACK.
 2. RESISTORS ARE IN OHMS.
 3. CAPACITORS ARE IN MICROFARADS.

RS232 CONNECTIONS:
 J2-2, J2-5, & J2-7

BYTE-BACK CO.
RS-232
LOGIC DIAGRAM
DWN: D PARQUE 1-76-83