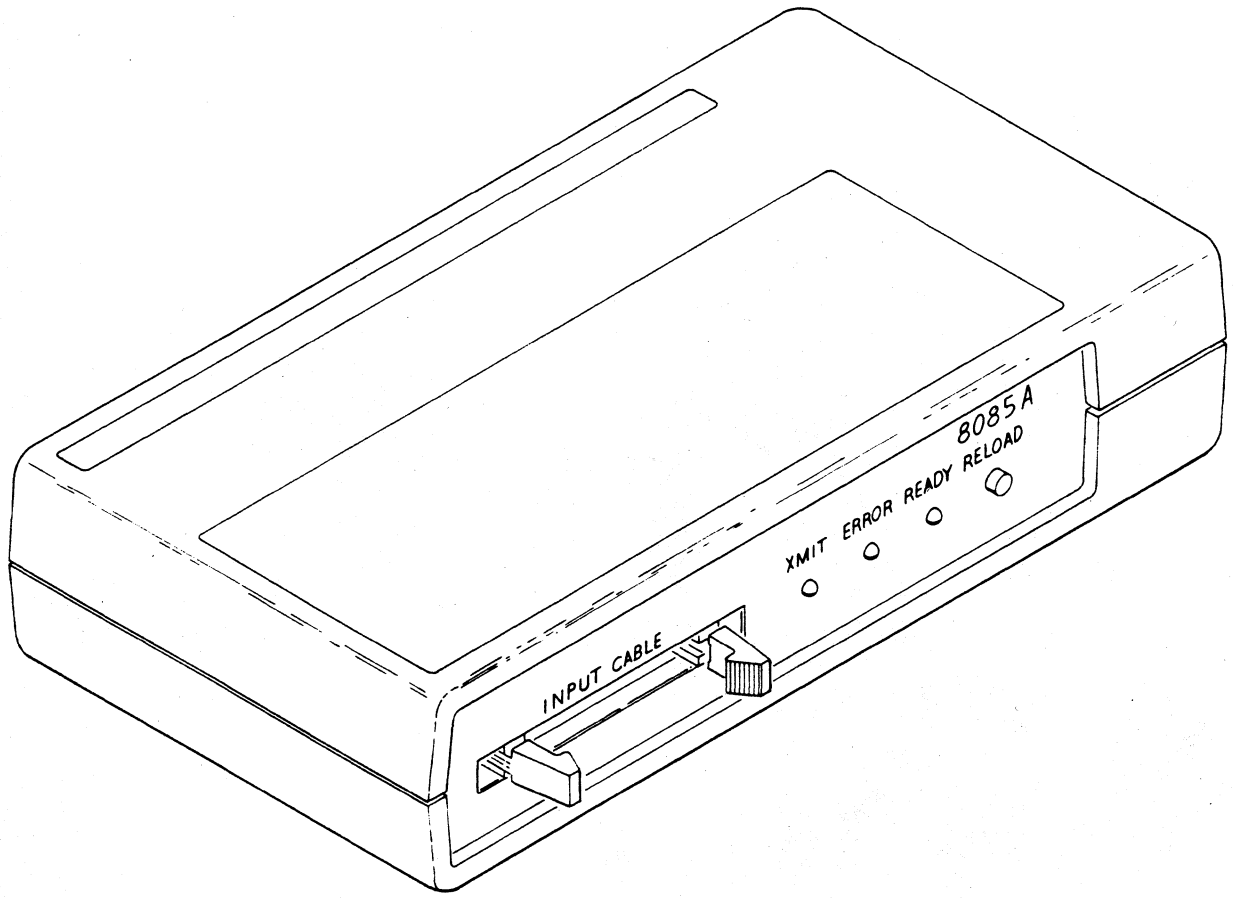
# RTE-816 DISASSEMBLER
# OPERATING INSTRUCTIONS
# MANUAL ADDENDUM

## 8085A DISASSEMBLER (PART NO. 0114-0275-10)




**3-83/100**

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*Electronics*

## Certification

Gould Inc., Design and Test Systems Division certifies that this instrument was thoroughly tested and inspected and found to meet its published specifications when it was shipped from the factory.

## Warranty

All Gould Inc., products are warranted against defects in materials and workmanship. This warranty applies for one year from the date of delivery, or, in the case of certain major components listed in the operating manual, for the specified period. We will repair or replace products that prove to be defective during the warranty period. If a unit fails within thirty days of delivery, Gould Inc. will pay all shipping charges relating to the repair of the unit. Units under warranty, but beyond the thirty day period, should be sent to Gould Inc. prepaid and Gould Inc. will return the unit prepaid. For units out of the one year warranty period, the customer will pay all freight charges. IN THE EVENT OF A BREACH OF GOULD INC.'S WARRANTY, GOULD INC. SHALL HAVE THE RIGHT IN ITS DISCRETION EITHER TO REPLACE OR REPAIR THE DEFECTIVE GOODS OR TO REFUND THE PORTION OF THE PURCHASE PRICE APPLICABLE THERETO. THERE SHALL BE NO OTHER REMEDY FOR BREACH OF THE WARRANTY. IN NO EVENT SHALL GOULD INC. BE LIABLE FOR THE COST OF PROCESSING, LOST PROFITS, INJURY TO GOODWILL, OR ANY SPECIAL OR CONSEQUENTIAL DAMAGES. THE FOREGOING WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

WARNING:

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. As temporarily permitted by regulation, it has not been tested for devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

The following procedures may help to alleviate the Radio or Television Interference Problems:

1. Reorient the antenna of the receiver receiving the interference.

2. Relocate the equipment causing the interference with respect to the receiver (move or change relative position).

3. Reconnect the equipment causing the interference into a different outlet so the receiver and the equipment are connected to different branch circuits.

4. Remove the equipment from the power source.

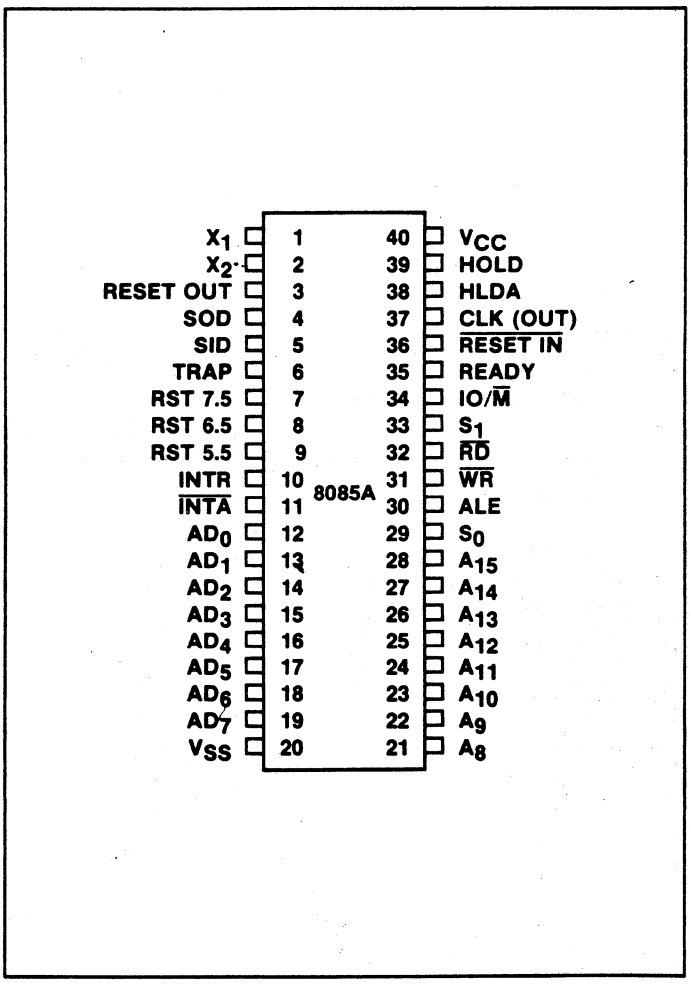
NOTE:

The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Printing Office, Washington, D.C. 20402. Stock No. 004-000-00345-4.

## SCOPE

This addendum provides the user with specific information on the 8085A target microprocessor version of the RTE-816 Disassembler (Part No. 0114-0275-10). Included in the addendum are an 8085A pinout diagram, microprocessor-to-logic analyzer connection data, CRT displays of the pre-programmed menus, a CRT display of captured code in the disassembled format and special notes on the disassembler/logic analyzer.

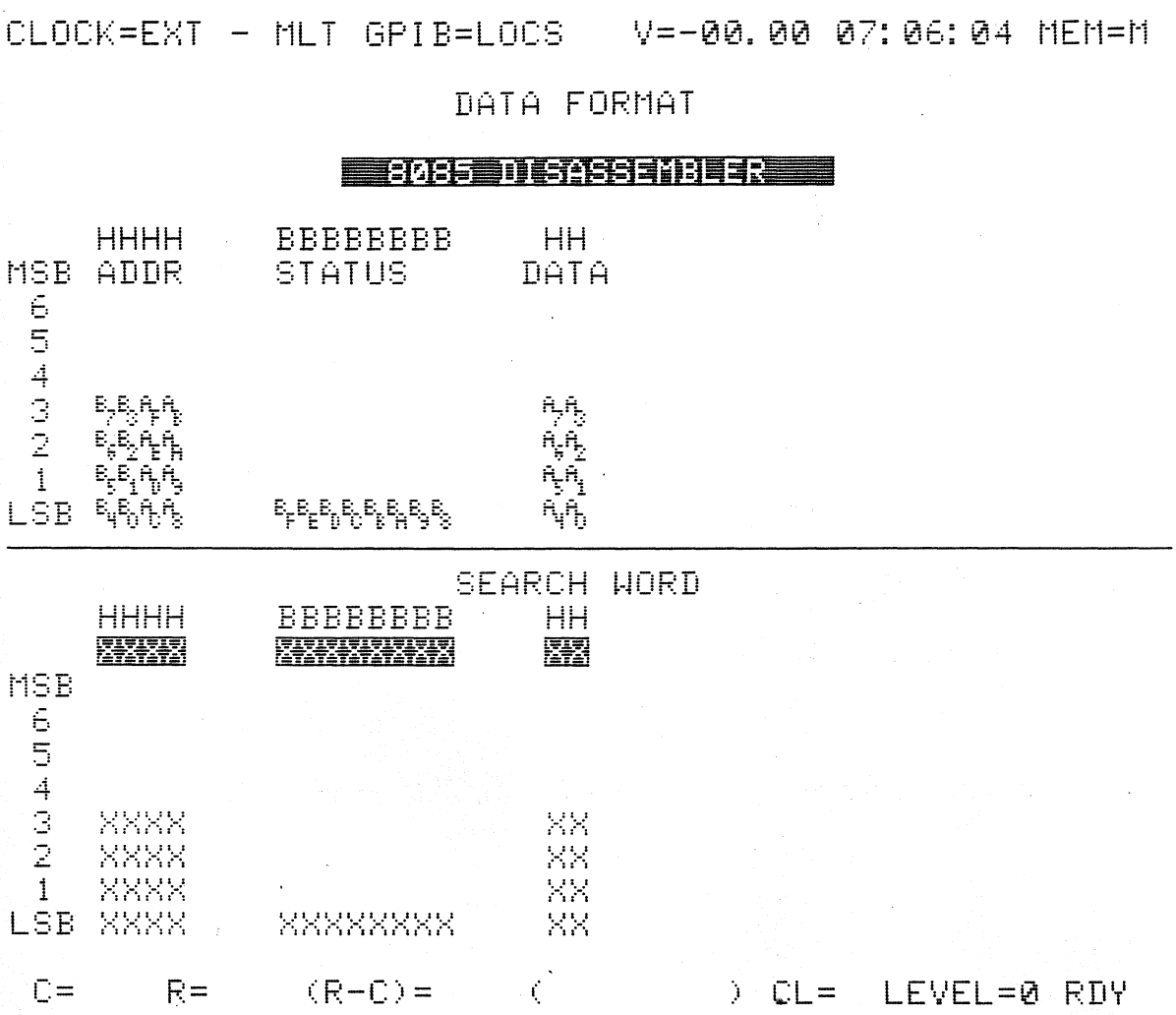
### MICROPROCESSOR PINOUT DIAGRAM



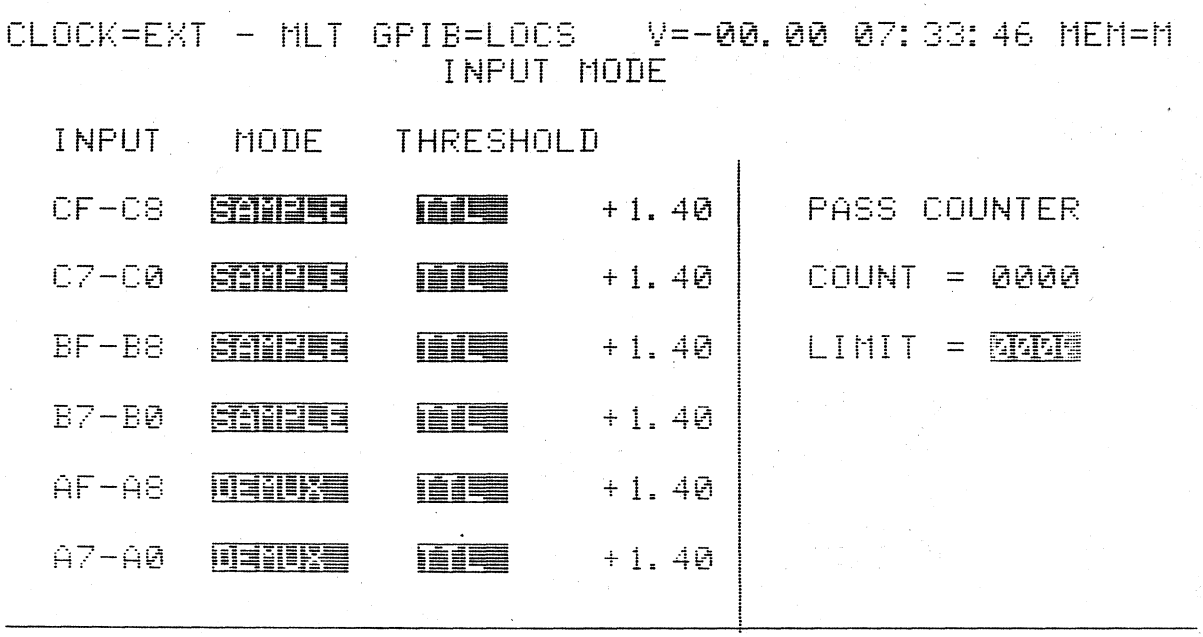
## MICROPROCESSOR-TO-LOGIC ANALYZER CONNECTION DATA

| 8085A SIGNAL | 8085A PIN | K101-D/K102-D PIN ASSIGNMENT |
|---|---|---|
| X1 | 1 | |
| X2 | 2 | |
| RESET OUT | 3 | |
| SOD | 4 | |
| SID | 5 | |
| TRAP | 6 | BF |
| RST 7.5 | 7 | BE |
| RST 6.5 | 8 | BD |
| RST 5.5 | 9 | BC |
| INTR | 10 | BB |
| $\overline{\text{INTA}}$ | 11 | CJ |
| AD0 | 12 | A0 |
| AD1 | 13 | A1 |
| AD2 | 14 | A2 |
| AD3 | 15 | A3 |
| AD4 | 16 | A4 |
| AD5 | 17 | A5 |
| AD6 | 18 | A6 |
| AD7 | 19 | A7 |
| VSS | 20 | GND-A-B-C SECTIONS |

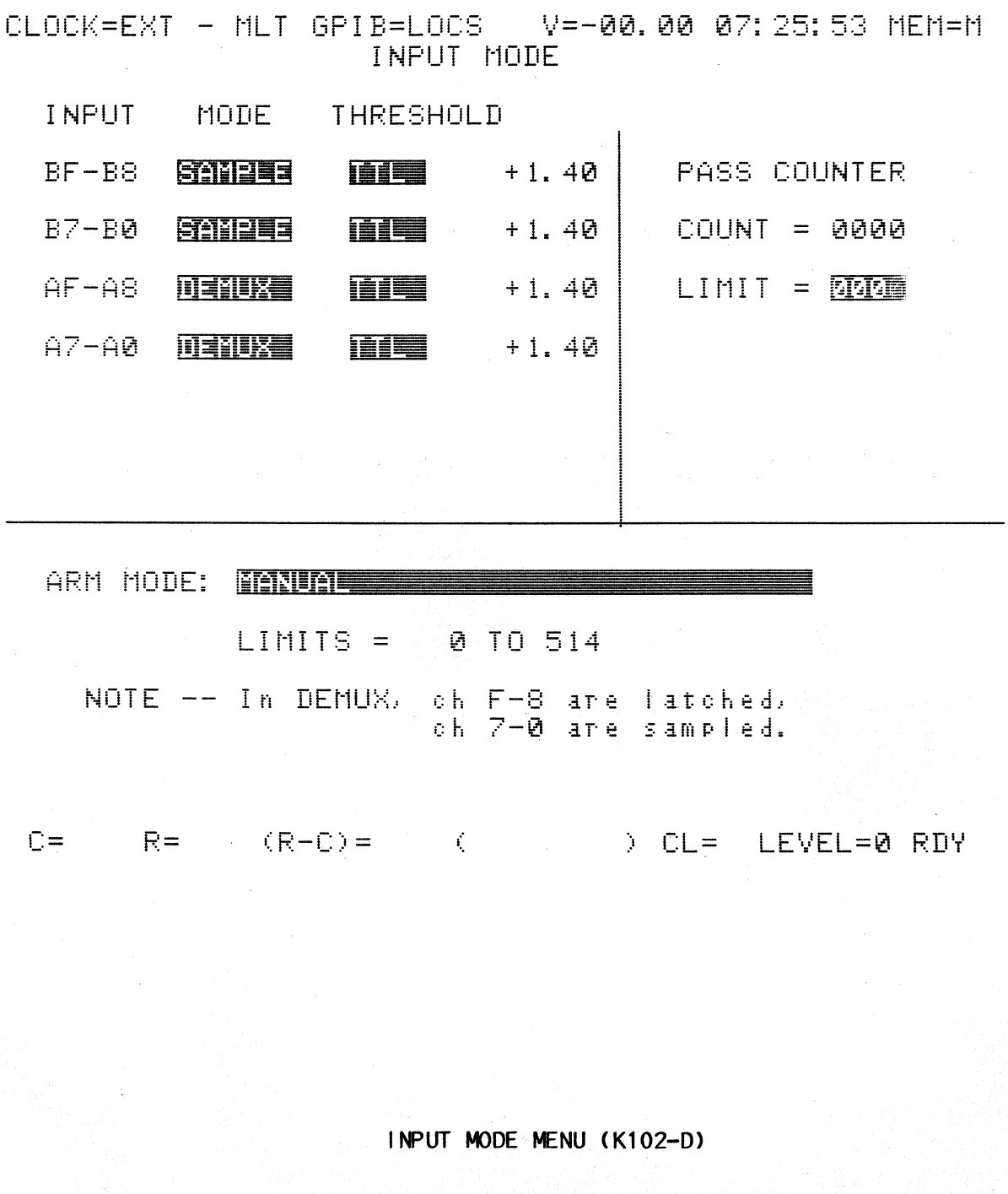
| 8085A SIGNAL | 8085A PIN | K101-D/K102-D PIN ASSIGNMENT |
|---|---|---|
| VCC | 40 | |
| HOLD | 39 | |
| HLDA | 38 | |
| CLK (OUT) | 37 | AK |
| RESET IN | 36 | |
| READY | 35 | |
| IO/$\overline{\text{M}}$ | 34 | BA |
| S1 | 33 | B9 |
| $\overline{\text{RD}}$ | 32 | AJ |
| $\overline{\text{WR}}$ | 31 | BJ |
| ALE | 30 | AR |
| SO | 29 | B8 |
| A15 | 28 | B7 |
| A14 | 27 | B6 |
| A13 | 26 | B5 |
| A12 | 25 | B4 |
| A11 | 24 | B3 |
| A10 | 23 | B2 |
| A9 | 22 | B1 |
| A8 | 21 | B0 |



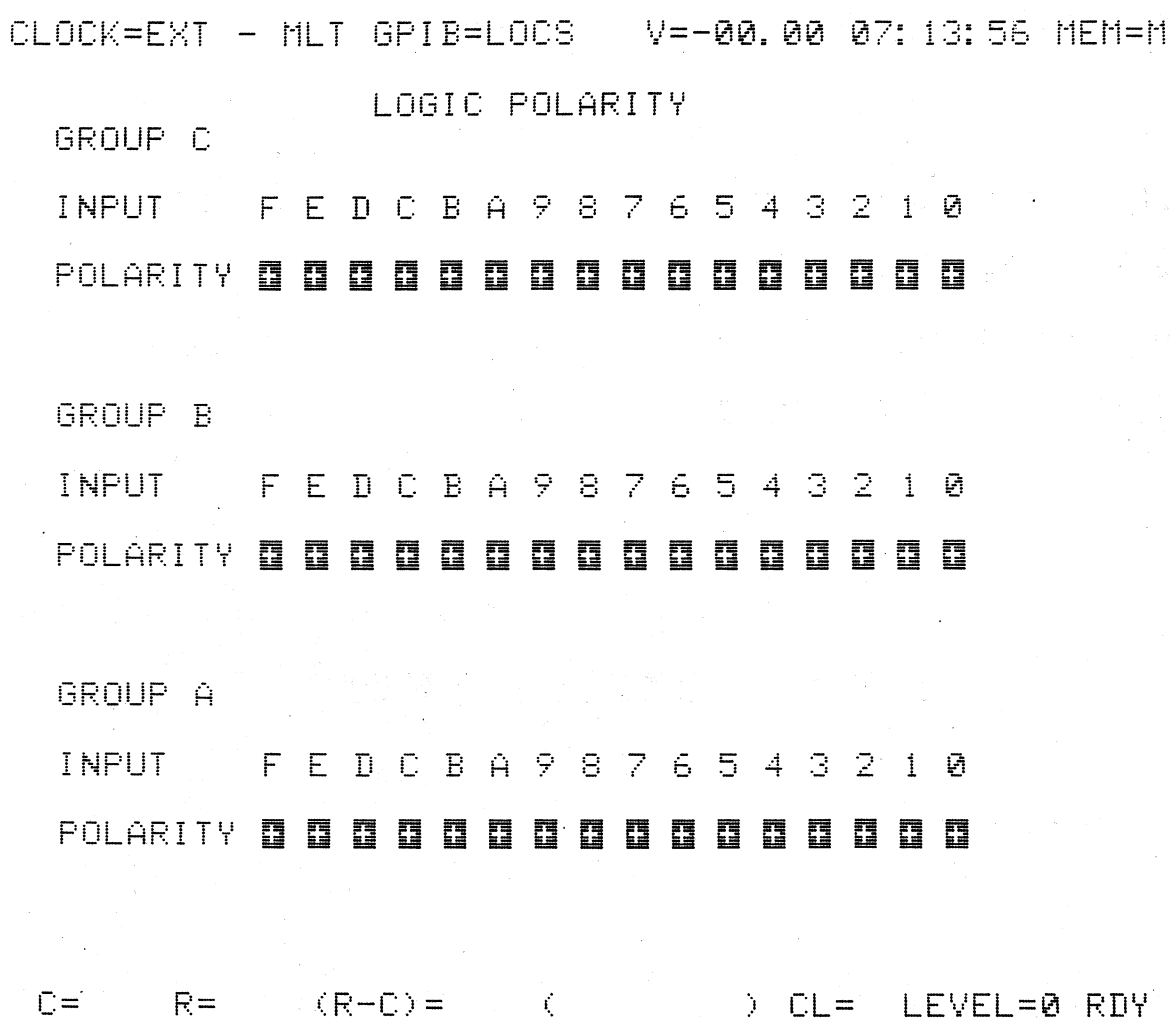

DISASSEMBLER DATA FORMAT MENU



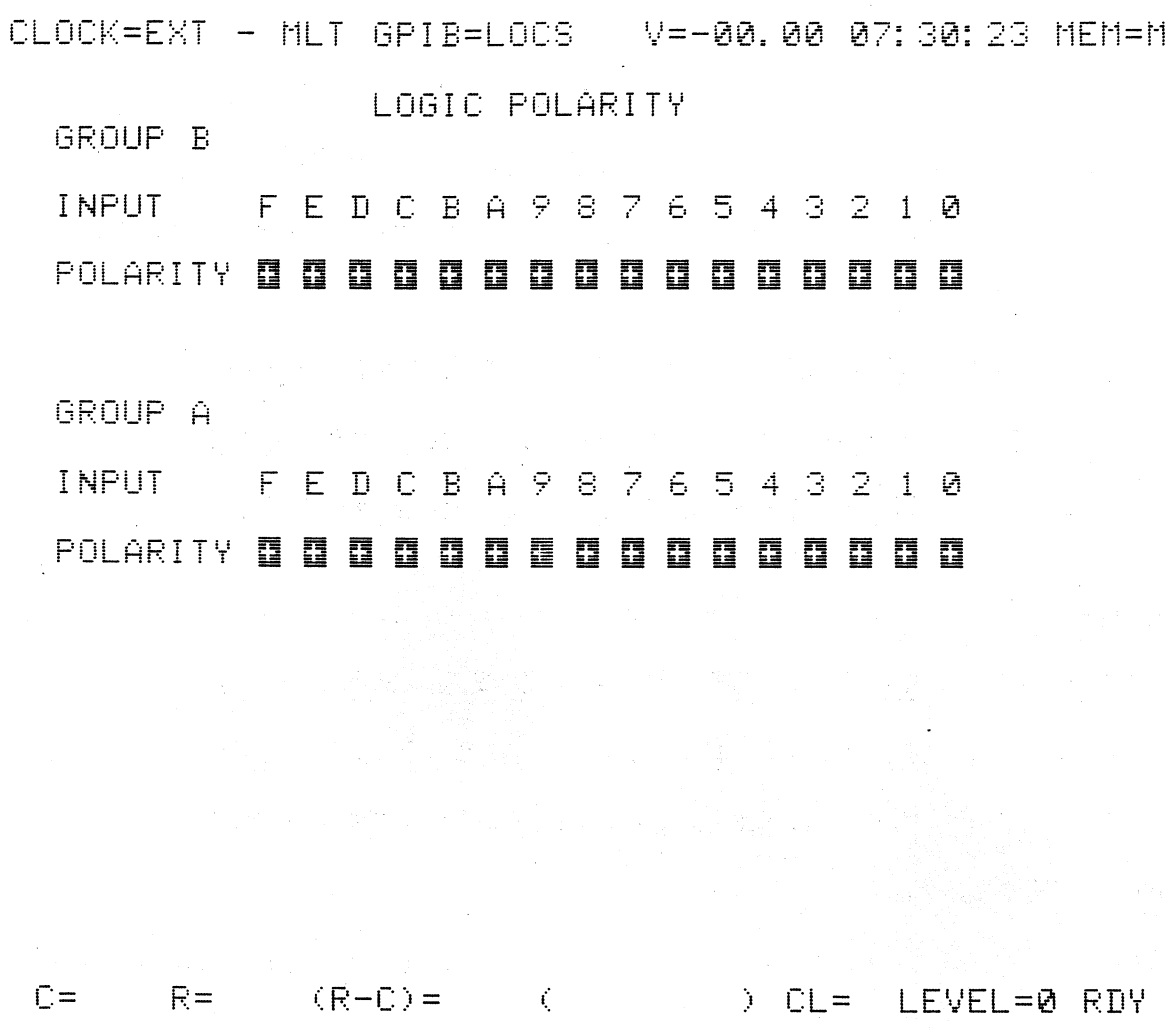

INPUT MODE MENU (K101-D)



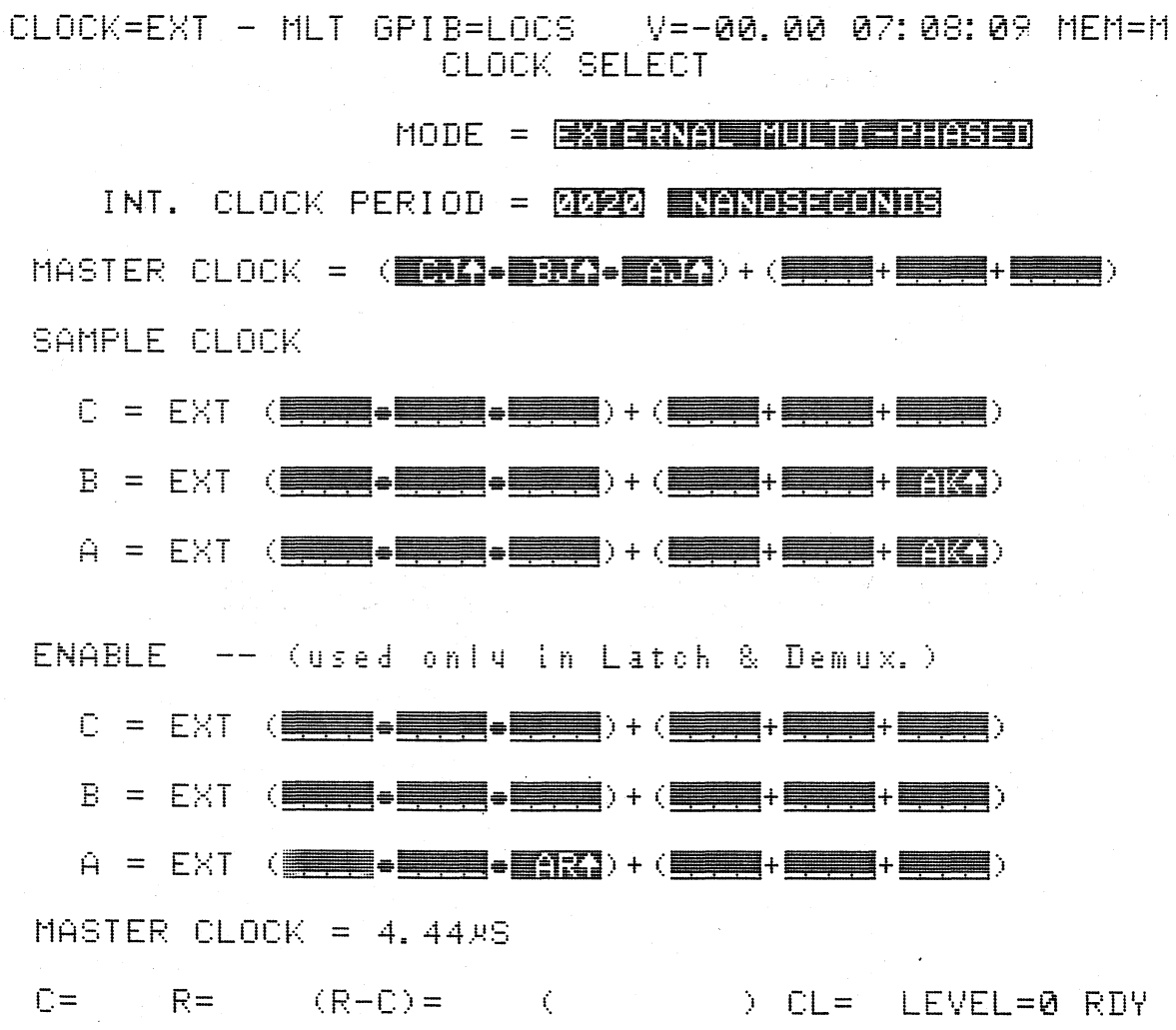

INPUT MODE MENU (K102-D)



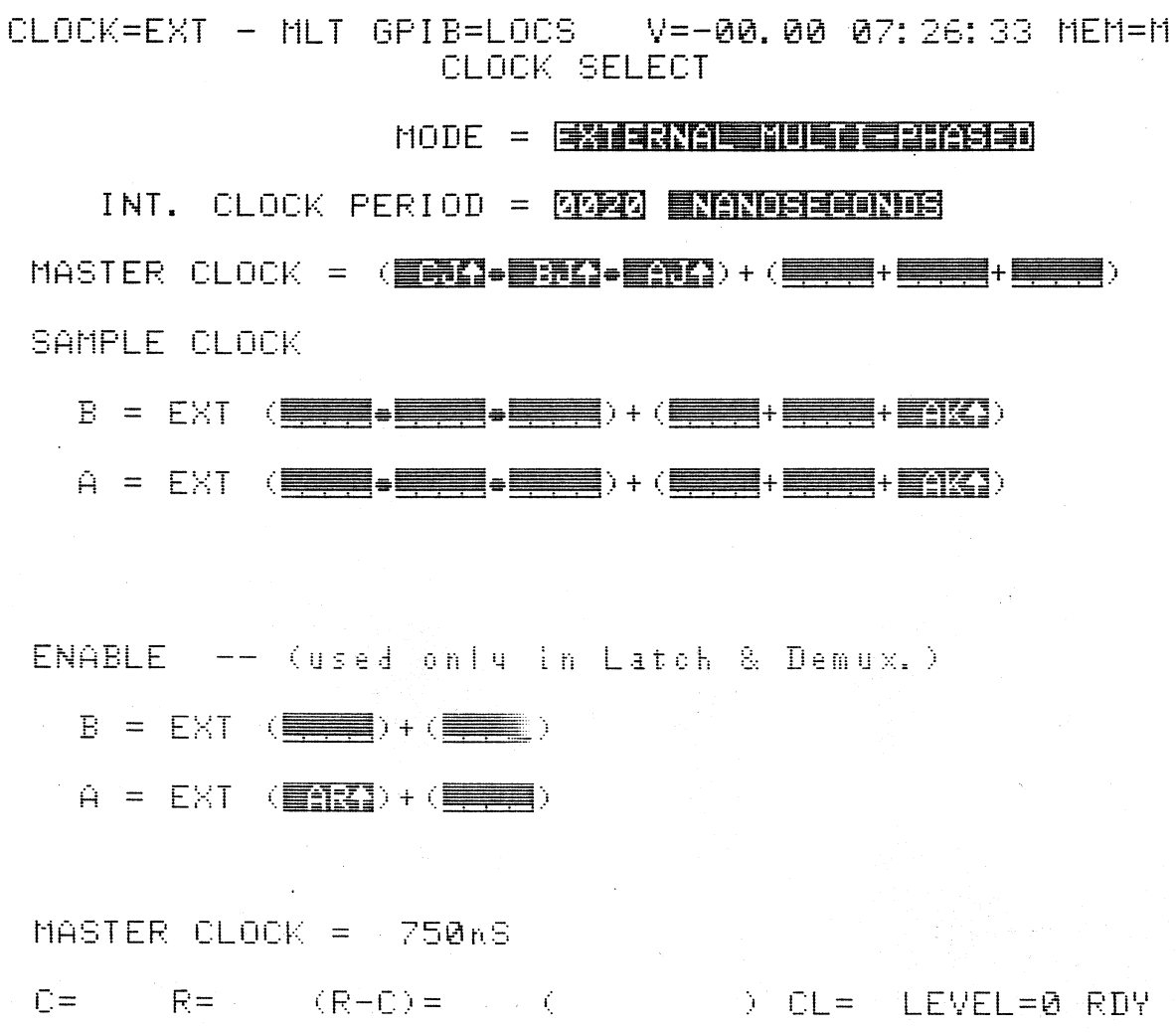

LOGIC POLARITY MENU (K101-D)



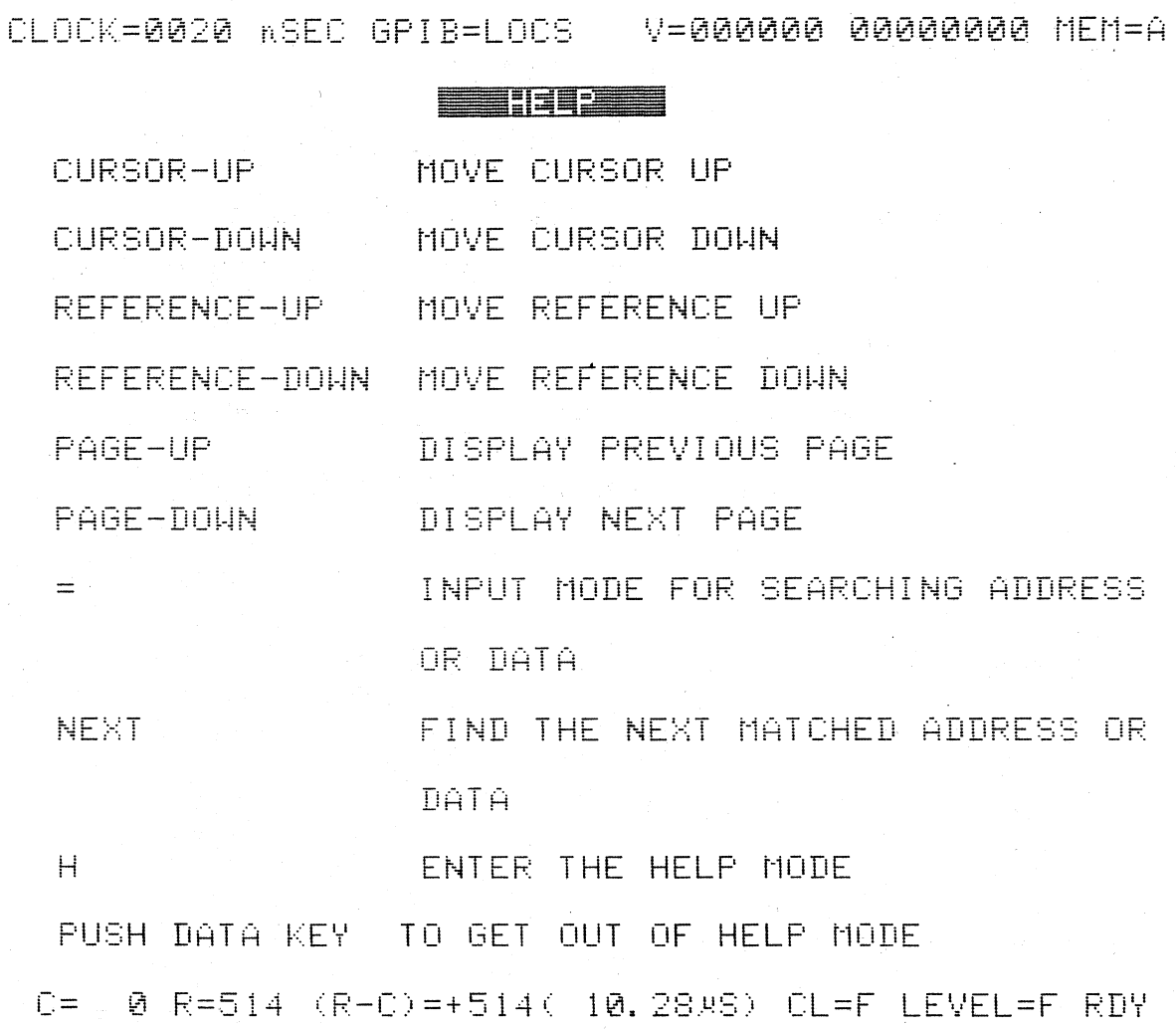

LOGIC POLARITY MENU (K102-D)




CLOCK SELECT MENU (K101-D)




CLOCK SELECT MENU (K102-D)


CLOCK=0020 nSEC GPIB=LOCS V=000000 00000000 MEM=A
HELP
CURSOR-UP MOVE CURSOR UP
CURSOR-DOWN MOVE CURSOR DOWN
REFERENCE-UP MOVE REFERENCE UP
REFERENCE-DOWN MOVE REFERENCE DOWN
PAGE-UP DISPLAY PREVIOUS PAGE
PAGE-DOWN DISPLAY NEXT PAGE
= INPUT MODE FOR SEARCHING ADDRESS
OR DATA
NEXT FIND THE NEXT MATCHED ADDRESS OR
DATA
H ENTER THE HELP MODE
PUSH DATA KEY TO GET OUT OF HELP MODE
C= 0 R=514 (R-C)=+514( 10.28μS) CL=F LEVEL=F RDY

HELP MENU

## CRT DISPLAY OF CAPTURED CODE IN DISASSEMBLED FORMAT

```
CLOCK=EXT - MLT GPIB=LOCS    V=-00.00 07:23:33 MEM=A

                    8085 DISASSEMBLER
     FRAME ADDR       OBJECT CODE  MNEMONIC              L
C        0  0823          31C220    LXI   SP,20C2        0
         3  0826          13        INX   DE              1
         4  0827          D5        PUSH  DE              1
         5  20C1-WRITE    02                              1
         6  20C0-WRITE    2D                              1
         7  0828          CD6303    CALL  0363            1
        10  20BF-WRITE    08                              1
        11  20BE-WRITE    2B                              1
        12  0363          CD6C02    CALL  026C            1
        15  20BD-WRITE    03                              1
        16  20BC-WRITE    66                              1
        17  026C          7A        MOV   A,D             1
        18  026D          0F        RRC                   1
        19  026E          0F        RRC                   1
        20  026F          0F        RRC                   1
        21  0270          0F        RRC                   1
        22  0271          E60F      ANI   0F              1
        24  0273          21F920    LXI   HL,20F9         1
        27  0276          77        MOV   M,A             1
        28  20F9-WRITE    00                              1
        29  0277          7A        MOV   A,D             1
        30  0278          E60F      ANI   0F              1
        32  027A          23        INX   HL              1

 C=   0 R=514 (R-C)=+514(          ) CL=0 LEVEL=1 RDY
```

NOTE:

All multiple instructions appear on one line under the OBJECT CODE column. For example, frame 7 above shows a 3-byte instruction (CD6303) for a "Call to Address 0363". In this example, frame 7 (address 0828) would contain the Call byte (CD), frame 8 (address 0829) would contain the low-order address byte (63) and frame 9 (address 082A) would contain the high-order address byte (03).

## SPECIAL NOTES

1. The status byte mnemonics that are available for the trace control menu of the logic analyzer are listed below. Each mnemonic can be immediately paged by pressing the logic analyzer key indicated.

| MNEMONIC | QUICK KEY |
|---|---|
| XXX (Don't Care) | 0 |
| READ | 1 |
| WRITE | 2 |
| INPUT | 3 |
| OUTPUT | 4 |
| FETCH | 5 |
| HALT | 6 |
| ACK | 7 |
| INT | 8 |
| RST 5.5 | 9 |
| RST 6.5 | A |
| RST 7.5 | B |
| TRAP | C |

2. After the RTE-816 pre-programs the disassembler data format, input mode, logic polarity and clock select menus of the logic analyzer, the trace control selections must be made by the user before making a recording. The trace control selections determines exactly which portions of the data stream are recorded or ignored.

3. A question mark (?) in the MNEMONIC column of the disassembled data format display indicates that a three-byte instruction was executed in three non-sequential addresses.

4. When the target microprocessor (8085A) is not providing the required master clock (CJ ↑●BJ ↑●AJ ↑) to the logic analyzer, the message "MASTER CLOCK = >10ms" appears on the bottom of the pre-programmed clock select menu. This indicates that a valid recording cannot be made.