इ रि से ट
विद्युत सिगनल प्रयोगशाला
प्रयोग नं: ई एस एल 35

**IRISET**
ELECTRICAL SIGNALLING LABORATORY
**EXPERIMENT NO. : ESL 35**

नाम
Name : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

अनुक्रमांक
Roll No : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

प्राप्त अंक
Marks Awarded :

पाठ्यक्रम
Course : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

दिनांक
Date : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

अनुदेशक का अधाक्षर
Instructor Initial :

## HANDS-ON PRACTICE ON MICROLOK-II EI

## FAULT FINDING IN MICROLOK-II

**Fault 1: Both the Systems shutdown-** Error Code: 705

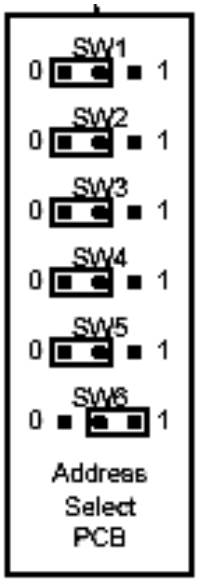
- Error code 705 indicates ----"Application Killed System"(Refer Error code list in MLK-Manual) – UM6800C
- Open Maintenance Tool Program and Check **System Error Log**.
- Note that **Kill bit is set by Application logic.**
- Open the Free Run Variable Display of Maintenance Tool program and observe
- a) FCOR bit is SET in KILL group.
- b) FCOR2 bit is SET in FCOR group.
- c) S30HR_F bit is SET and S30 HR is CLEAR in FCOR2 group.
- i.e. S30 HR relay is picked UP even though system has not given the output to pickup S30 HR relay.

Conclusion: S30HR Relay is picked up due to false feed.

**Fault 2: One System shutdown –** Error code**: 902**

- As per manual Error code 902 indicates ---- "IN 16 type error check IN 16 Board".
- Open Maintenance Tool Program and Check System Error Log.
- Note that "**IN 16 type error, Board J15".**
- i.e In the cardfile at 15 th board which is Vital Input board having 16 nos. of inputs, the address setting is wrong.
- Check the address selection jumper settings on the "Address select PCB" as per table given below and correct the jumper settings accordingly.

| Board Order | Address select PCB jumper settings | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2 | 0 | 1 | 0 | 0 | 0 | 1 |
| 3 | 0 | 0 | 1 | 0 | 0 | 1 |
| 4 | 0 | 1 | 1 | 0 | 0 | 1 |
| 5 | 0 | 0 | 0 | 1 | 0 | 1 |
| 6 | 0 | 1 | 0 | 1 | 0 | 1 |
| 7 | 0 | 0 | 1 | 1 | 0 | 1 |
| 8 | 0 | 1 | 1 | 1 | 0 | 1 |
| 9 | 0 | 0 | 0 | 0 | 1 | 1 |
| 10 | 0 | 1 | 0 | 0 | 1 | 1 |
| 11 | 0 | 0 | 1 | 0 | 1 | 1 |
| 12 | 0 | 1 | 1 | 0 | 1 | 1 |
| 13 | 0 | 0 | 0 | 1 | 1 | 1 |
| 14 | 0 | 1 | 0 | 1 | 1 | 1 |
| 15 | 0 | 0 | 1 | 1 | 1 | 1 |
| 16 | 0 | 1 | 1 | 1 | 1 | 1 |




Conclusion: False address selection for Interface cards on backside of Cardfile

Note: Address selection jumper settings can be obtained from .MLL file of the approved application program with correct checksum & CRC of that station.

**Fault 3: System- A is shutdown –** Error code: 705

- As per manual Error code 705 indicates ---- "Application Killed System".
- Open Maintenance Tool Program and Check System Error Log.
- Note that **Kill bit is set by Application logic.**
- Open the Free Run Variable Display of Maintenance Tool program and observe
- a) A_SYSOK_B bit is SET in KILL group. i.e. A SYSTEM OK relay is dropped.
- b)"PTINMISMATCH" bit is SET in "A SYS OK" group.
- c) 19NWKR bit is SET and 19NWKR.BA is CLEAR in "PTINMISMATCH" group.
- i.e. MLK – A is reading 19NWKR input and MLK – B is NOT reading 19NWKR input, results MLK – A is KILLED.

Conclusion: One system is reading Vital Input (19 NWKR) and other is not reading. In this case the system which reading the Vital Input is KILLED.

**Fault 4: S1 Signal is not clearing through control panel.**

- Observe for Error code on CPU card.
- If CPU card is NOT showing any Error code, Check whether it is clearing through VDU panel operation or not.
- If it is clearing through VDU panel operation, observe the concerned button Input LED indication in NV I/O board.
- If Non-Vital I/O board is not reading the concerned Input, check the wiring and if required check NVI/O board.
- If one system is reading Non Vital input and other system is not reading the same, then concerned operation will NOT be executed.
- Check the wiring at concerned 1in-2 out terminal of MLK cable termination rack.
- If the wiring is O.K then replace the concerned NV I/O card.
- If both systems are NOT reading the concerned Input then check concerned wiring in the Control Panel / 1in-2out terminal of MLK cable termination block.

Conclusion: Note that S1 GN wire going to MLK-A is opened at 1in-2 out terminal. Hence S1 Signal is not clearing through control panel.

**Grouping in the Free Run Variable Display of Maintenance Tool:**

KILL –

- KILL
- A_SYSOK_F
- A_SYSOK_B
- FCOR

A SYS OK –

- VCOR_A
- A_SYSOK_F
- VINMISMATCH
- VOUTMISMATCH
- PTINMISMATCH
- PTOUTMISMATCH
- SIGINMISMATCH
- SIGOUTMISMATCH
- TRKINMISMATCH
- MISCINMISMATCH

FCOR –

- KILL
- FCOR
- FCOR1
- FCOR2
- FCOR3
- FCOR4
- VINMISMATCH
- A_SYSOK_F
- A_SYSOK_B
- B_SYSOK_F
- B_SYSOK_B

FCOR2 –

- FCOR2
- S30HR_F
- S30D2HHR_F
- S25DR
- S26DR
- S26HR
- S27HR
- S30DR

PTMISMATCH –

- PTINMISMATCH
- PTOUTMISMATCH
- 11NWKR
- 11RWKR
- 12NWKR
- 12RWKR
- 13NWKR
- 13RWKR
- 18NWKR
- 18RWKR
- 19NWKR
- 19RWKR
- 20NWKR
- 20RWKR
- 11NWKR.AB
- 11RWKR.AB
- 12NWKR.AB
- 12RWKR.AB
- 13NWKR.AB
- 13RWKR.AB
- 18NWKR.AB

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Date: signature of the trainee