



इ रि से ट
विद्युत सिगनल प्रयोगशाला
प्रयोग नं: ई एस एल 32

IRISET
ELECTRICAL SIGNALLING LABORATORY
EXPERIMENT NO. : ESL 32

नाम

नाम

Name : _____

अनुक्रमांक

Roll No : _____

पाठ्यक्रम

Course : _____

दिनांक

Date : _____

प्राप्त अंक

Marks Awarded : _____

अनुदेशक का अधाक्षर

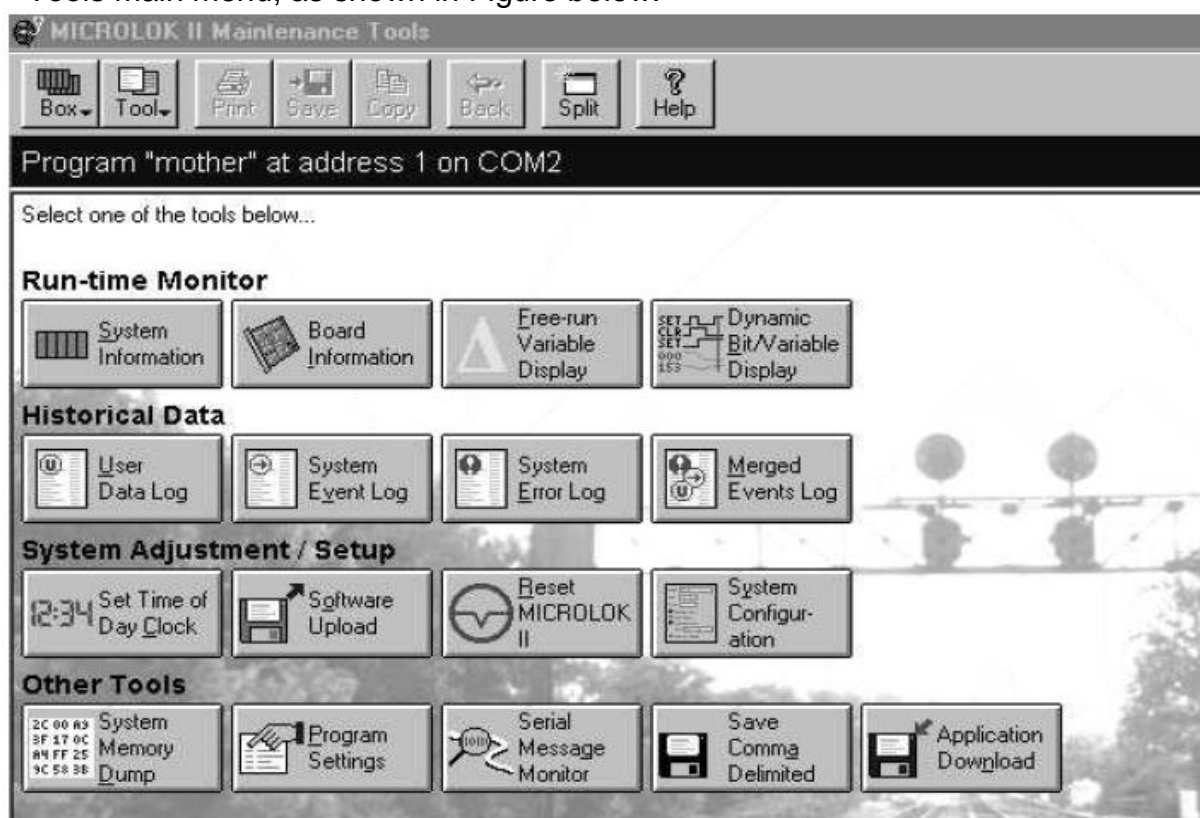
Instructor Initial : _____

MAINTENANCE TOOL OF MICROLOK-II EI SYSTEM

AIM: Study on Maintenance tool of MICROLOK-II Electronic Interlocking system.

Using the tools provided in this Maintenance tool program, maintenance personnel and application engineers can perform a wide variety of Microlok II system maintenance, configuration, and diagnostics functions.

The program provides these tools as selections on the Microlok II Maintenance Tools main menu, as shown in Figure below.



This main menu displays the selection buttons that activate the primary functions of the program. These selection buttons are grouped into four main categories.

- Run-time Monitor

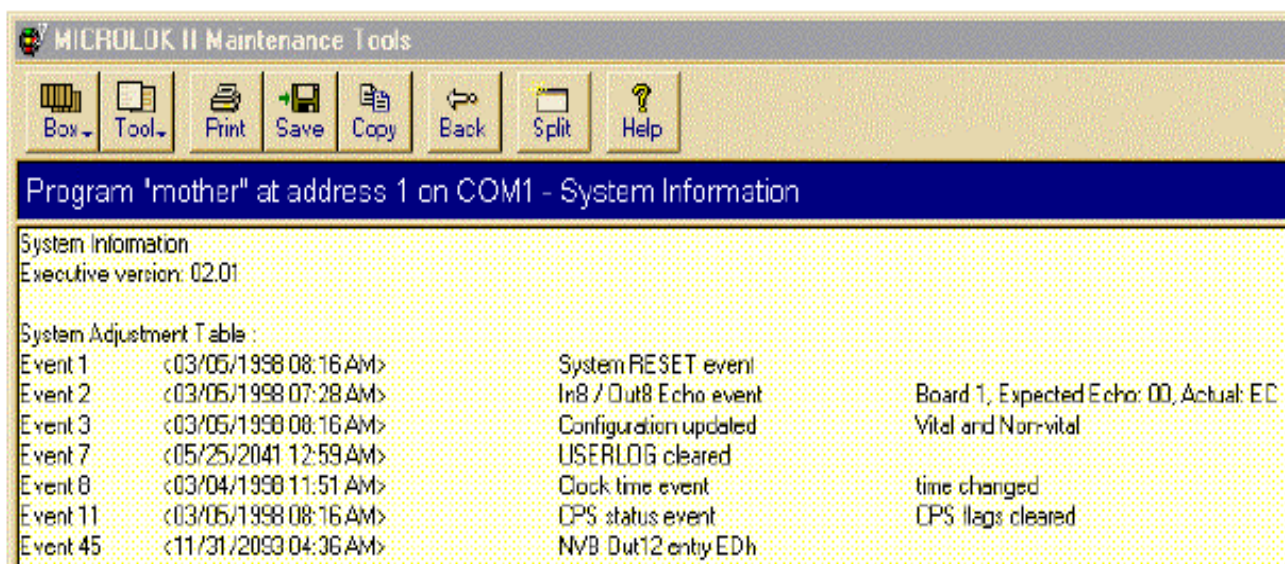
- Historical Data
- System Adjustment/Setup
- Other Tools

RUN-TIME MONITOR

These buttons lead to display data about an operating MICROLOK II and its application. This group of tools enables you to view the current status of equipment and related systems.

➤ System Information:

It views system events and appears as shown below.



This display shows the current version number of the executive software and an abbreviated "snap-shot" of the most recent system events. Where appropriate, the display defines the action taken in response to an event.

The system information display lists the time and date when the following types of events last occurred:

- System resets
- System errors
- Unit configuration
- Clearing of the system log clear
- Clearing of the user data log clear
- Time changes
- Clearing of conditional power supply (CPS) trips

Since some of these events occur infrequently, the displayed date also includes the year in which the associated event occurred.

➤ Board Information:

It displays the status information about Input – Output interface PCBs (Printed Circuited Boards) of a Microlok II or Serial link. It displays the current status of each enabled PCB in the Microlok II cardfile. Each board type is dynamically updated.

➤ **Free-run Variable Display and Dynamic Bit/Variable Display**

These two tools enable you to view the real-time status of Microlok II system variables. These tools list the current values for selected variables and bits as well as a real-time list of changes. These two displays provide the same information in different ways. The free-run display presents the status information in a text mode, while the dynamic bit/variable display represents the indications graphically in strip-chart view of bit and variable changes.

HISTORICAL DATA

These buttons lead to views which display data which an operating Microlok II has collected and stored. The Microlok II system logs and reports information of critical errors, warnings, and operational events. This section contains four tools that enable you to review the logged system information in several ways.

➤ **User Data Log :**

The user data log records only those events that the user specifies. It displays changes of selected bit and numeric variables as requested by the application or configuration. This log is capable of recording up to 90,000 of the most recent specified Boolean changes, or at least 64,000 Boolean and/or numeric changes.

➤ **System Event Log:**

The system event log records up to 5000 of the most recent critical errors, warnings, and events. Any system critical error or warning will be logged in the system log. Events are used to relay miscellaneous system information and may be limited by use of the configuration.

➤ **System Error Log:**

The system error log is limited to critical errors. Since the older events may be lost in system event logger, the system error log contains a list of the last 50 time stamped critical system errors.

➤ **Merged Events Log:**

The merged events log enables you view errors, warnings, and events as in the User Data, System Event, System Error log and Dynamic variable changes merged onto the same time axis. This log also provides graphic displays of parameters and events as specified in the user data log.

SYSTEM ADJUSTMENT / SETUP

These buttons lead to views which modify parameters of the Microlok II.

➤ **Set Time of Day Clock:**

This function displays the date and time settings for both the Microlok II system CPU and the laptop computer and sets the Microlok II on-board clock.

➤ **Software Upload:**

This tool is used for uploading a custom-designed application software program from the laptop PC to the Microlok II CPU. This tool interacts with Windows-based files; therefore, you should be familiar with application software and Windows file navigation to use this feature.

➤ **Reset Microlok II:**

This tool enables you to reset the Microlok II CPU from the laptop computer. The reset function is used mainly to clear system faults and return the system to normal operation.

➤ **System Configuration :**

The configuration tool provides a wide variety of options for checking and modifying the configuration of the Microlok II system hardware and software.

Three types of options are provided within this tool:

- System configuration options enable you to modify the general system parameters and the user parameters, and to assign specific parameters to the user data log.
- Board configuration options enable you to enable/disable and configure the individual Microlok II system Printed Circuit Boards.
- Link configuration options enable you to configure the Microlok II system communication links.

OTHER TOOLS

These buttons lead to views which allow special diagnostic functions to be performed.

➤ **System Memory Dump:**

Allows US&S personnel to provide specialized debugging assistance. The system memory dump tool enables US&S system developers and maintainers to perform debugging operations when a customer encounters a software problem.

➤ **Program Settings:**

The Program Settings dialog is used to modify the way in which the system stores and displays data. These options can also change the general appearance of the screens.

➤ **Serial Message Monitor:**

This tool enables you to monitor serial message traffic on a selected active serial link.

➤ **Save Comma Delimited download:**

This tool lets the user download the user data log in a comma-delimited format. This file can be viewed in Microsoft Excel. The file can be saved via the diagnostic port link, or directly from the PCMCIA card in the card reader on the individual PC.

➤ **Application Download :**

This tool lets the user download the application image from the EEPROM on the Microlok II unit. As a default, the file is stored with a filename.mlp extension so it can be easily uploaded to the system, if necessary.

Review Questions:

1. With what features of maintenance tool 'ONLINE DATA' of relay logic can be extracted?
2. How to extract past data of relay logic with the help of maintenance tool?
3. What is the difference between System Event logger and System Error logger?
4. How to set the time in Microlok II system?
5. How to trace out fault in any circuit with the help of maintenance tool?
6. How to Reset Microlok II system?

7. What is the importance of system configuration feature in maintenance tool?

Date:

Signature of the Trainee