

## Article Info

Article ID: SIJR.1.1.10  
Article Type: Research Article  
Published: Vol. 1, Issue 1, 2026, pp. 54–58  
DOI: To be Assigned

## Journal Info

ISSN: To be assigned  
Scholaria Publications  
Scholaria International Journal of Research  
International Peer Reviewed Journal  
www.scholariajournal.org

## Article History

Received : 28 Feb 2026  
Revised : 20 Mar 2026  
Accepted : 02 Apr 2026  
Published : 28 Apr 2026

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# Study of Log Books and History Cards in Electronic Equipment Maintenance

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## Abstract

Maintenance documentation plays an important role in improving the reliability and performance of electronic equipment. This paper discusses the significance of log books, history cards, maintenance work orders, preventive maintenance scheduling, and maintenance records used in electronic servicing environments. These documents help technicians maintain accurate repair information, identify repeated failures, and perform systematic troubleshooting activities. The study also explains the importance of preventive maintenance procedures and proper scheduling techniques for reducing equipment downtime and improving operational efficiency. Maintenance records provide valuable data regarding equipment condition, servicing intervals, repair history, spare parts usage, and technician activities. Proper documentation supports maintenance planning and enhances equipment reliability. The presented work highlights how effective maintenance management practices contribute to safer operation, better resource utilization, and improved maintenance quality in electronic systems. The paper is useful for students, technicians, and maintenance personnel involved in troubleshooting and preventive servicing of electronic equipment.

**Keywords:** Preventive maintenance, log book, history cards, maintenance records, troubleshooting, electronic equipment, maintenance work order, preventive servicing, equipment reliability, maintenance documentation

## 1 Log Book and History Cards

### 1.1 Introduction

Log books and history cards are important records used during maintenance and repair activities of electronic equipment. These records help technicians understand previous faults, repair actions, and component replacements carried out on a system. By maintaining proper records, future troubleshooting becomes easier and repair time can be reduced significantly.

A history card generally contains information such as the date of failure, observed symptoms, corrective measures, replaced parts, and testing details. When a similar fault occurs again, technicians can quickly refer to earlier maintenance records and identify suitable repair procedures. Continuous failures in a subsystem may indicate the need for complete replacement rather than repeated repairs.

## **1.2 Maintaining Accurate History Cards**

Proper maintenance documentation is essential for effective preventive maintenance. Every fault and corrective action should be recorded carefully in a standard format. Accurate reporting helps maintenance staff analyze recurring issues and improve equipment reliability. These records also support supervisors in monitoring repair quality and maintenance performance.

History cards provide valuable technical information for future servicing activities. They help identify common failure patterns, downtime duration, repair costs, and component usage. Detailed documentation improves maintenance planning and assists technicians in performing systematic troubleshooting operations. Therefore, maintaining updated history cards is considered an important practice in electronic equipment maintenance.

## **2 Maintenance Work Order**

A maintenance work order is an official request submitted to the maintenance department for servicing or repairing equipment. It provides complete details about the fault condition and helps technicians prepare the required tools, instruments, and documents before starting the repair process. Work orders also support maintenance planning and help maintain proper service records.

The work order system is useful for organizing preventive maintenance activities and estimating equipment downtime. In situations where multiple repair requests are received, maintenance supervisors can assign priorities and distribute available manpower effectively. Different organizations may use customized coding systems to identify the type of fault, causes of failure, and corrective actions performed during maintenance.

Common fault categories may include equipment failure, abnormal noise, reduced performance, safety issues, or intermittent operation. The causes of failure can be related to power supply, motors, control circuits, software issues, environmental conditions, or normal wear and tear. Maintenance actions may involve inspection, calibration, replacement, alignment, lubrication, diagnosis, or reinstallation of components.

The following information is generally included in a maintenance work order:

1. Work order number and date
2. Department requesting maintenance
3. Name of the requesting supervisor
4. Priority level of the repair
5. Time at which the request was raised
6. Equipment handover time
7. Equipment description and identification number

8. Equipment location
9. Nature of the problem
10. Assigned technician name
11. Repair starting time
12. Repair completion time

### **3 Scheduled Preventive Maintenance**

Preventive maintenance scheduling is an important activity used to improve equipment reliability and reduce unexpected failures. Unlike corrective maintenance, preventive maintenance is planned in advance and focuses on maintaining smooth production operations. Proper scheduling helps organizations reduce downtime, increase productivity, and improve equipment life.

Maintenance activities are usually prioritized according to the severity and operational impact of the problem. Emergency conditions related to safety receive the highest priority, followed by equipment downtime, routine preventive maintenance tasks, and cosmetic repairs. Maintenance supervisors and production teams generally coordinate together while preparing maintenance schedules to avoid interruptions in regular production activities.

Preventive maintenance schedules may be prepared based on operating hours, days, weeks, or monthly intervals depending on the type of equipment. Proper planning ensures the availability of spare parts, skilled technicians, and required tools before starting maintenance operations. Accurate maintenance records also help in tracking completed activities and future servicing requirements.

The following activities are commonly included in preventive maintenance planning:

1. Preparing a list of equipment requiring preventive maintenance
2. Defining maintenance intervals for each machine
3. Creating annual and monthly maintenance schedules
4. Ensuring the availability of spare parts and materials
5. Assigning maintenance responsibilities to technicians
6. Supervising maintenance activities for timely completion
7. Updating maintenance records after servicing
8. Following up on pending issues and corrective actions

#### **3.1 Procedures**

Well-defined maintenance procedures help technicians perform inspection and servicing activities efficiently. A systematic procedure acts as a guideline for carrying out maintenance work step by step without missing important operations. Proper planning and standard procedures also help reduce maintenance time and improve work quality.

Maintenance procedures generally include inspection methods, safety precautions, testing steps, required tools, and documentation practices. Following standard procedures improves consistency in repair activities and helps maintenance staff achieve better operational results.

## 4 Preventive Maintenance Records

Preventive maintenance records are important documents used to evaluate the effectiveness of maintenance programs. These records provide information related to equipment failures, servicing history, replaced components, inspection details, and maintenance intervals. Proper documentation helps maintenance engineers analyze equipment performance and identify recurring problems.

Maintenance records are generally prepared using information collected from work orders and servicing reports. The records should clearly mention the repair duration, maintenance activities performed, spare parts used, and the technician responsible for the work. Accurate record keeping improves maintenance planning and supports better decision-making for future servicing operations.

Maintenance procedures should be written in clear and practical language so that technicians can easily follow them during inspection and repair activities. Safety precautions, required tools, operational steps, and corrective measures must be properly documented. Good maintenance documentation helps reduce equipment downtime and improves overall system reliability.

The following information is commonly included in preventive maintenance records:

1. Equipment identification number
2. Equipment name
3. Equipment category or classification
4. Equipment location
5. Preventive maintenance intervals
6. Daily operating duration
7. Date of previous maintenance
8. Date of next scheduled maintenance
9. Time required for preventive maintenance
10. Number of technicians required
11. Spare parts and materials required
12. Technician signature after completion of work

## 5 Conclusion

Log books, history cards, work orders, and preventive maintenance records are essential elements in the maintenance management of electronic equipment. Proper documentation helps technicians identify recurring faults, monitor repair activities, and improve troubleshooting efficiency. These records also support maintenance planning and reduce equipment downtime.

Preventive maintenance procedures and scheduling techniques improve the operational reliability of electronic systems. Systematic maintenance practices help organizations minimize unexpected failures, increase equipment life, and maintain production continuity. Accurate

work orders and maintenance records provide valuable technical information for future servicing and inspection activities.

Overall, effective maintenance documentation and preventive maintenance practices contribute to safe, reliable, and cost-effective operation of electronic equipment. Proper record keeping and planned servicing enhance maintenance quality and support better decision-making in repair and troubleshooting environments.

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### Cite this Article:

D Dayakar, "Study of Log Books and History Cards in Electronic Equipment Maintenance," *Scholaria International Journal of Research*, Vol. 1, Issue 1, 2026, pp. 54–58.

