


# ***START SECTION***

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- All Maintenance Procedures Start from Here!
- Use the maintenance manual corresponding to the micro-program version of the maintained storage system.
- All maintenance operations to be performed on this storage system are controlled through the SVP.
- When taking maintenance actions, carefully read this maintenance manual to avoid operation mistakes.
- The storage system is designed so that troubles are isolated using the action code (ACC). If no ACC is presented, isolate the trouble based on TROUBLESHOOTING SECTION ([TRBL00-00](#)).
- The service personnel should read THEORY OF OPERATION SECTION ([THEORY00-00-00](#)) and understand its contents.

## 1. How to Use This Maintenance Manual

The following heading indicates the precautions on the systems described in this manual. Furthermore, the  SAFETY SUMMARY section describes the precautions on potential personal injury hazards. Therefore, understand them and follow the instructions fully.

**CAUTION**

: Indicates a hazardous situation which could result in serious system failure when doing maintenance on the system.

**NOTICE :**

Indicates a hazardous situation which could result in moderate system failure when doing maintenance on the system.

Each section includes a table of contents so that you can quickly find a page that you need to see.

Section page numbers shown in texts link to pages to be referenced. A section page number consists of a section name abbreviation and a page number.

When servicing the storage system by using this manual, select the item to be checked from [“2. Configuration of the Maintenance Manual”](#) and follow the instructions given in the corresponding procedure.

NOTE: SVP or Web Console screens in this maintenance manual are samples, and they may not be the same as the actual screens.

Actual Windows screens on SVP and Web Console and their title bar names may differ from images in this maintenance manual depending on the environments of SVP and Web Console.

## 2. Configuration of the Maintenance Manual

This maintenance manual consists of the following sections: SAFETY SUMMARY, START, OPTION & MICROVERSION, MICRO-FC, THEORY OF OPERATION, LOCATION, INSTALLATION (General, Installation, Addition, and Removal), SVP, MAINTENANCE UTILITY, WEB CONSOLE, DIAGNOSIS, ACC (ACTION CODE), SIM RC, SSB, SSBLOG, TROUBLESHOOTING, REPLACEMENT, MESSAGE, PERIODIC CHECK, PARTS CATALOG and GLOSSARY.

The sections to explain the work procedures differ depending on the maintenance work items.

Refer to the sections corresponding to the work items and proceed to the work according to the instructions.

Refer to the following for the configuration of each section.

### 1. SAFETY SUMMARY

This section describes the safety precautions against the maintenance work and warning labels in the manual and on the Storage System.

### 2. START

This section describes how to use the maintenance manual and the overview of the contents described in each section.

### 3. OPTION & MICROVERSION

This section describes the availability of using parts and P.P. by the micro-program version for each model.

### 4. MICRO-FC

This section describes the micro-program exchange, troubleshooting during micro-program exchange, and wizards for micro-program exchange.

### 5. THEORY OF OPERATION

This section describes the hardware overview, basic specifications, architecture, and P.P. configuration.

### 6. LOCATION

This section describes the parts location, switches and LEDs on components, various cable connections, and so on.

### 7. INSTALLATION (General, Installation, Addition, and Removal)

This section describes the installation requirements, procedures for installing the storage system, for mounting the components, and for connecting the cables, which need to be performed before the start of operation.

It also describes the procedures for changing the type of parts as well as for adding and removing storage systems and parts.

### 8. SVP

This section describes operations and functions of SVP, the procedures for starting and terminating the storage system status display, and so on.

## 9. MAINTENANCE UTILITY

This section describes functions of Maintenance Utility launched from the SVP window and maintenance functions for the storage system.

## 10. WEB CONSOLE

This section describes storage system management functions, the IPv6 setting, the Alert setting/FTP transfer function, and so on, which are performed on the Web Console.

## 11. DIAGNOSIS

This section describes the diagnosis function, diagnosis procedure, errors that are output at the time of diagnosis, and so on.

## 12. ACC (ACTION CODE)

This section describes the list and details of estimated failed part code ACC created by SSB or SIM.

## 13. SIM RC

This section describes the contents of SIM reference codes output from the Storage System at the time of failure occurrence or processing correspondence.

## 14. SSB

This section describes the details of SSB logs, such as the procedure for searching sense bytes and information of each format (24-byte SSB and 32-byte SSB).

## 15. SSB LOG

This section describes the details of SSB logs such as information for each model or format.

## 16. TROUBLESHOOTING

This section describes the failure analysis, procedures for recovery from failures, and so on.

## 17. REPLACEMENT

This section describes the replacement operation procedure of each part.

## 18. MESSAGE

This section provides the list of a variety of messages and the details.

## 19. PERIODIC CHECK

This section describes the place where periodic cleaning is required and the procedures, battery check and replacement procedures.

## 20. PARTS CATALOG

This section describes the installation location of each part and details of the component parts.

## 21. GLOSSARY

This section describes the explanation of glossary used in the maintenance manual.