


START SECTION

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- NOTICE:**
- All Maintenance Procedures Start from Here!
 - Use the maintenance manual corresponding to the firmware version of the maintained storage system.

1. Precautions

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.

- All maintenance operations to be performed on this storage system are controlled through the Maintenance PC. 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 ([THEROY00-00-00](#)) and understand its contents.
- This maintenance manual describes information on previous firmware versions
Check a firmware version by the following method.
 - Maintenance Utility
Start the Maintenance Utility and check a firmware version.
(See FIRMWARE SECTION “[3.4 Procedure for Checking Firmware Version](#)”.)
- The storage system has the configuration that contains the SVP and the configuration that does not contain the SVP. This manual provides the descriptions on the premise of the configuration that contains the SVP. For the configuration that does not contain the SVP, the procedures relevant to the SVP are not necessary.

1.1 How to Use This Maintenance Manual

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 test procedure.

NOTE: Each Web Console screen on this maintenance manual is a sample, and it may not be the same as the actual screen.

2. Configuration of the Maintenance Manual

This maintenance manual consists of 18 sections in total including SAFETY SUMMARY, START, OPTION & FIRMWARE VERSION, FIRMWARE, THEORY OF OPERATION, LOCATION, INSTALLATION, MAINTENANCE PC, DIAGNOSIS, ACC (ACTION CODE), SIM RC, 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 & FIRMWARE VERSION

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

4. FIRMWARE

This section describes the Update Firmware procedure, troubleshooting during Update Firmware, MP installation procedure and configuration information replacement procedure.

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

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. MAINTENANCE PC

This section describes the setting contents and procedures of a Maintenance PC used by connecting to the Storage System when corresponding to failures and each maintenance procedure using the Maintenance PC.

9. DIAGNOSIS

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

10. ACC (ACTION CODE)

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

11. 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.

12. SSB LOG

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

13. TROUBLESHOOTING

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

14. REPLACEMENT

This section describes the replacement operation procedure of each part.

15. MESSAGE

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

16. PERIODIC CHECK

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

17. PARTS CATALOG

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

18. GLOSSARY

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