**digital**™

SA106/TA867 Storage Subsystem
User and Installation Guide

EK–SA106–IM–001

**Digital Equipment Corporation**

# Contents

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# Preface

This manual includes four chapters that provide the following information about the SA106-AA/AB and TA867-AA/AB Storage Subsystem.

- User Information

- Physical Installation

- Acceptance Testing

- Operation

# 1
# User Information

## 1.1  Introduction

The SA106 storage subsystem (Figure 1–1):

* Can be added to any installation that uses conventional ac power

* Does not require any special site preparation

The SA106 storage subsystem contains two compartments:

* Upper compartment with one factory installed magazine tape subsystem

* Lower compartment with the SCSI/STI adapter assembly

The TA867 Kit is installed in an existing cabinet.  See the installation instructions in the TA867 Kit for information.

The TA867 storage subsystem includes:

* Magazine tape subsystem

* SCSI/STI adapter assembly

* Mounting hardware kit

**Figure 1–1   SA106 Storage Subsystem**
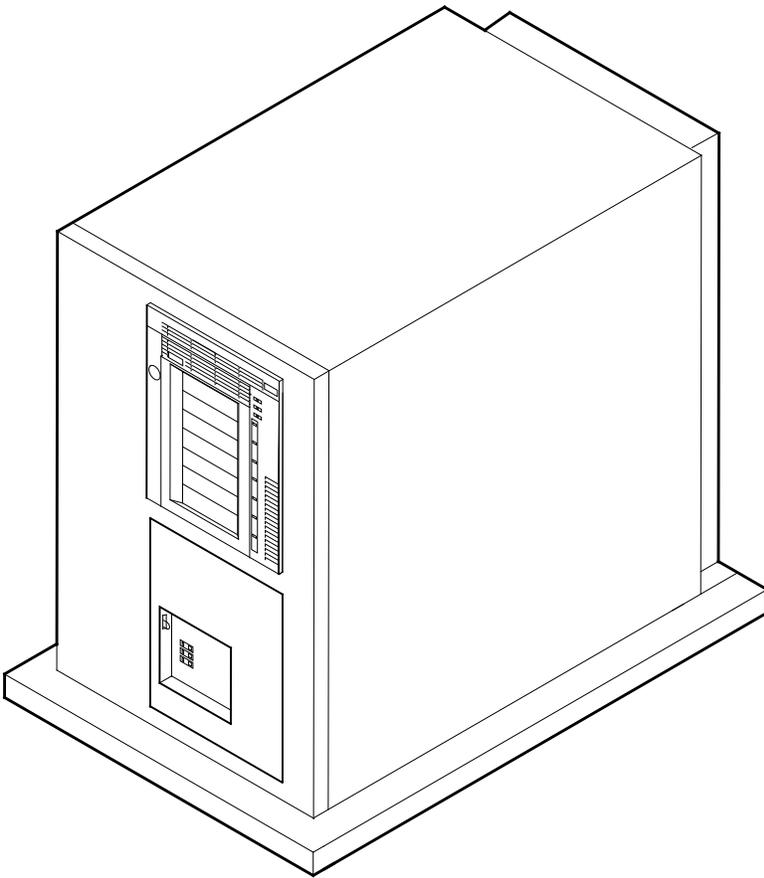


SHR-X0177_91-DG

## 1.2   Specifications

Table 1–1 lists the specifications of the SA106/TA867 storage subsystem.

**Table 1–1   Specifications**

| Characteristic | SA106/TA867 Storage Subsystem |
| --- | --- |
| Data backup capacity | 42.0 GB |
| Performance | 800 KB/s sustained data rate |
| Power requirements | 100-120/220-240 Vac (50/60 Hz) |
| Weight | 86.184 kg (190 lb) (SA106 only) |
| Height | 71.12 cm (28 in) (SA106 only) |
| Width | 43.18 cm (17 in) (SA106 only) |
| Length | 86.36 cm (34 in) (SA106 only) |
| Communications interface | STI bus |
| Environmental standard (operating) | 10°C to 40°C<br>20 to 80% RH |
| Environmental standard (nonoperating) | −40°C to 66°C<br>10 to 90% RH |
| EMI certification | Meets applicable FCC standards for Class A devices |
| Safety certification | Meets UL, CSA, and IEC standards |
| Power consumption | 175 W |

## 1.3   Related Documentation

See the *Tx867 Series Magazine Tape Subsystem Owner's Manual* (EK–TX867–OM) for information on the magazine tape subsystem contained in the SA106 subsystem.

# 2
# Physical Installation

## 2.1  Site Planning

Follow the requirements in this section to prepare a site for the SA106 and TA867 subsystems.

### 2.1.1  Space Requirements

Leave enough space to remove the magazine tape subsystem from the front of the cabinet (about 1 meter).  Also leave enough space to remove the SCSI/STI adapter assembly from the rear of the cabinet (about 1 meter).

### 2.1.2  Power Requirements

The subsystem can operate from 100 to 120 Vac at 60 Hz, or from 220 to 240 Vac at 50 Hz.

### 2.1.3  Environmental Requirements

The SA106 and TA867 conform to a modified class A environment (general offices and workstations).

- When the SA106 and TA867 are operating, the temperature should range from 10°C to 40°C with relative humidity of 20 to 80% noncondensing

- When the SA106 and TA867 are not operating, the temperature should range from –40°C to 66°C with relative humidity of 10 to 90%

### 2.1.4  STI Interconnect Cabling

1. Connect the STI cable(s) to the rear of the SA106 chassis (Figure 2–1). Each cable is secured with two captive screws.  For cabling of the TA867, see the documentation in the TA867 Kit.

2. Connect the HSC cable(s) to the K.SI module.

**NOTE**

**K.STI modules do not support the SA106 and TA867 storage subsystems.**

3. Assign a unique unit number to the magazine tape subsystem.  The unit number is a decimal number between 0 and 255.  To assign the unit number, use the push buttons on the side of the unit number switch to increase or decrease the number.

   Transport numbers are always assigned in groups of four to each formatter.  Transports are assigned the following unit numbers:

   • 0 to 3 for the first formatter

   • 4 to 7 on the second formatter of a system with two or more formatters

   • 8 to 11 on the third formatter, and so on

4. Place a decal identifying the transport unit number just below the loader fault indicator on the magazine tape subsystem .

### 2.1.5  STI Cables

The SA106 storage subsystem will contain one, 25-foot STI cable.  You will need a second cable for dual applications.

Table 2–1 lists part numbers and lengths of cables that can be connected to an SA106 storage subsystem:

**Table 2–1   STI Interconnect Cables**

| Part numbers | Length |
| --- | --- |
| BC26V–03 | .914 m (3 ft) |
| BC26V–06 | 1.828 m (6 ft) |
| BC26V–12 | 3.657 m (12 ft) |
| BC26V–25 | 7.62 m (25 ft) |
| BC26V–50 | 15.519 m (50 ft) |
| BC26V–6D | 1.93 m (6 ft 4 in) |
| BC26V–7L | 2.387 m (7 ft 10 in) |
| BC26V–80 | 24.663 m (80 ft) |

**Figure 2–1   SA106 Rear View**



A PORT
(STI
CABLE)

B PORT

SCSI
BUS

SHR-x0172_92.epsf
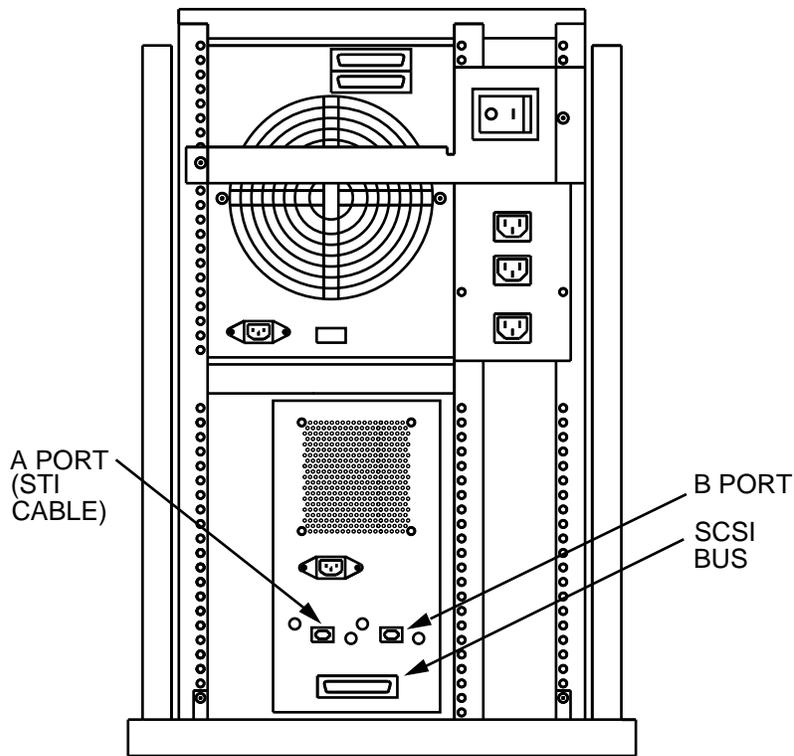
# 3

# Acceptance Testing

## 3.1  Power-on Self-test

See the *Tx867 Series Magazine Tape Subsystem Owners Manual* (EK–
TX867–OM) for information on power-on self-test (POST) for the magazine
tape subsystem.

## 3.2  Diagnostics

The two diagnostic tests for the SA106 and TA867 subsystems are
ILTAPE and ILEXER:

*   **In-Line Tape Diagnostic (ILTAPE)**–A canned sequence diagnostic
    that tests the SA106 and TA867 functions by using the basic tape
    commands.

*   **In-Line Exerciser (ILEXER)** — This diagnostic exercises from 1 to
    10 units in any combination of disk and drives connected to an HSC.
    Logic is tested by writing and reading predetermined data patterns
    and recording modes.

ILTAPE and ILEXER are run from the HSC ASCII port.  See the
appropriate HSC user documentation for more information.

To test the SA106 or TA867:

1.  Run ILTAPE for three passes.  No errors are allowed.  (When both
    STI ports are used, run ILTAPE through the second port for one pass
    also.)

2.  Run ILEXER for 15 minutes.  (When both STI ports are used, run
    ILEXER through the second port for 15 minutes also.)

# 4
# Operation

## 4.1 Controls and Indicators

The following are the indicators and switches on the SCSI/STI adapter module:

- Port select

- Fault

- Ready

- Unit number

Table 4–1 lists the function and state of each control/indicator:

**Table 4–1   SA106 and TA867 Controls and Indicators**

| Control /Indicator | Function/State |
|---|---|
| Port Select A | In the enable (in) position, PORT SELECT A allows the HSC to access port A. Under microprogram control, the HSC can then cause port A to go on line. |
| | Placing Port Select A in the disable (out) position with port A on line causes serious errors at the HSC. |
| | Port Select A lights when port A is on line (ready to receive any command or data). |
| Port Select B | The definition of Port Select B for port B is the same as the definition of Port Select A for port A. |
| Fault | The fault indicator lights when a potentially fatal error has been detected in the formatter. Even though an error has occurred, the formatter still attempts to communicate with the HSC. |
| | With a fatal error present, press the Fault switch to clear the error. |
| Ready | The ready indicator lights after the SCSI/STI adapter successfully completed its power-on self-tests (POST). |
| Unit number | DSA unit number |
| TZ867 | See the Tx867 Series Magazine Tape Subsystem Owner's Manual |

Figure 4–1 shows the SA106 configuration.

**Figure 4–1   SA106 and TA867 Controls and Indicators**



INDICATOR

FAULT

B PORT

A PORT

UNIT
NUMBER

SHR-X0170_91-DG
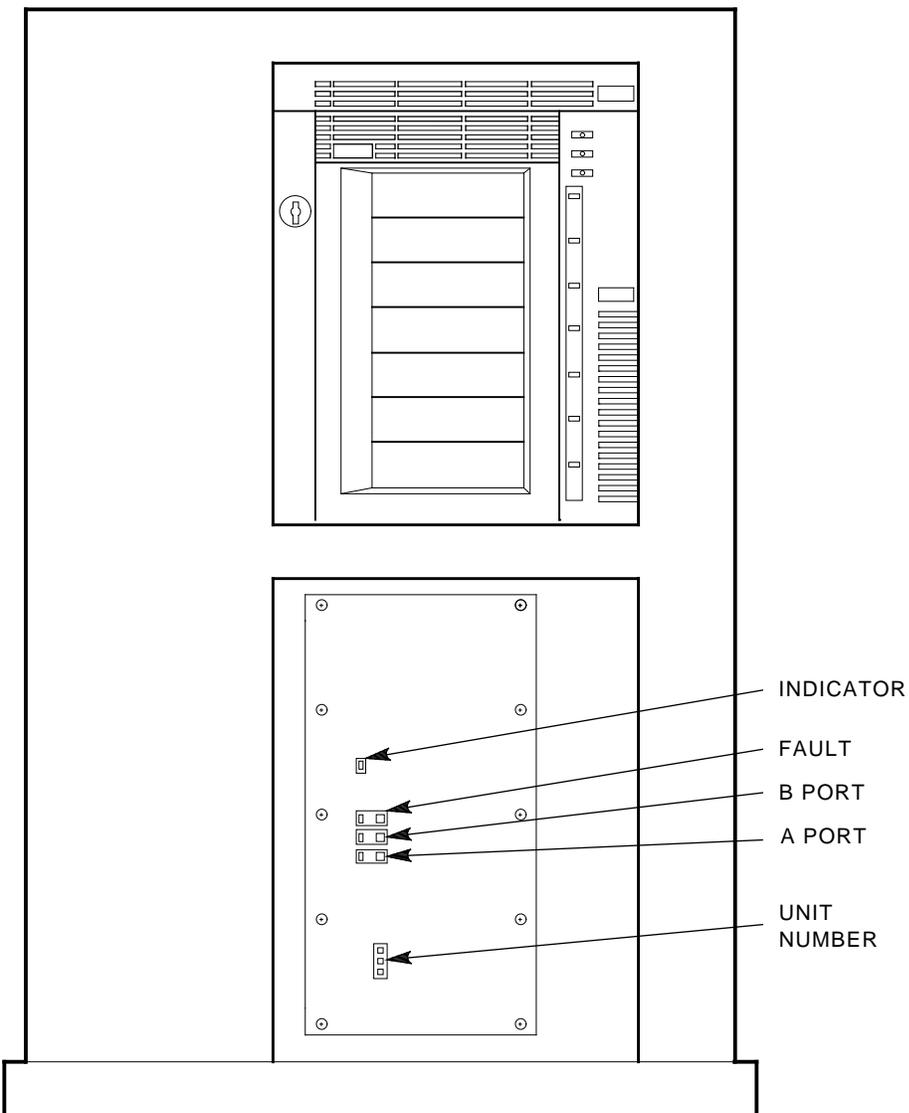
**NOTE**
**The TA867 configuration will depend on your cabinet installation.**
**Controls and indicators on the SA106 and TA867 subsystems are**
**identical.**

See the *Tx867 Series Magazine Tape Subsystem Owner's Manual* (EK–
TX867–OM) for information on operating the magazine tape subsystem.