digital™

SA106 Storage Subsystem Installation Guide

EK–SA106–IM–002

Digital Equipment Corporation
Maynard, Massachusetts

First Edition, August 1992
Second Edition, June 1993

This document was prepared using VAX DOCUMENT, Version 2.1.

Contents

Figures

Tables

Preface

This guide includes four chapters that provide the following information about the SA106-AA/AB storage subsystems:

- Overview
- Physical Installation
- Acceptance Testing
- Operation

1 Overview

1.1 Introduction

The SA106 storage subsystem is available in two versions:

- SA106-AA
- SA106-AB

1.1.1 SA106-AA, SA106-AB

The SA106-AA and SA106-AB versions contain two compartments:

- An *upper* compartment with one factory-installed magazine tape subsystem
- A *lower* compartment with a SCSI/STI adapter assembly

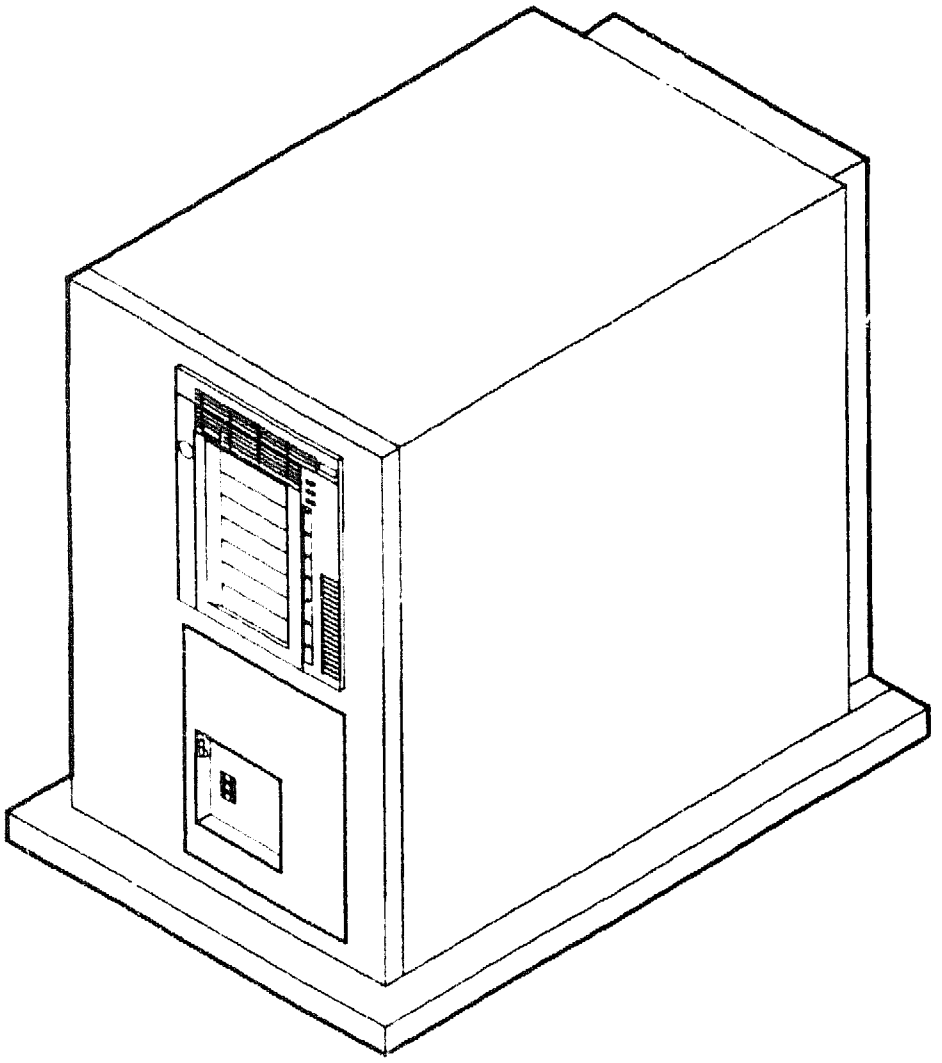
The SA106 storage subsystem (Figure 1–1) uses conventional ac power and does not require any special site preparation.

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

The TA867 storage subsystem includes:

- Magazine tape subsystem
- 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 subsystem, including the TA867 storage subsystem.

Table 1–1 Specifications

Characteristic	SA106 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 20 to 80% RH
Environmental standard (nonoperating)	–40°C to 66°C 10 to 90% RH
EMI certification	Meets applicable FCC standards for Class A devices
Safety certification	Meets UL, CSA, and IEC standards

1.3 Related Documentation

The *Tx867 Series Magazine Tape Subsystem Owner's Manual* (EK–TX867–OM) describes the TA867 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 subsystem.

2.1.1 Space Requirements

Leave enough space to remove the magazine tape subsystem from the front of the cabinet (about 1 meter).

For the *SA106-AA/-AB options*, leave enough space (about 1 meter or 40 inches) to remove the SCSI/STI adapter assembly from the rear of the cabinet.

2.1.2 Power Requirements

The SA106 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 subsytem conforms to a modified class A environment (general offices and workstations).

When the SA106 is:

- *Operating*, the temperature should range from 10°C to 40°C with relative humidity of 20 to 80% noncondensing
- *Not operating*, the temperature should range from –40°C to 66°C with relative humidity of 10 to 90%

2.1.4 Cabling the SA106-AA/-AB

1. Connect the STI cable(s) to the rear of the SA106 chassis.

   For the:

   - SA106-AA/AB version, the STI cable(s) connects to A port or B port at the rear bottom of the SA106 subsystem (Figure 2–1). Each cable is secured with two captive screws.

2. Connect the other end of the STI cable(s) to the HSC rear panel.

NOTE

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

3. Connect the power cord at the rear of the SA106 subsystem.

2.1.5 STI Cables

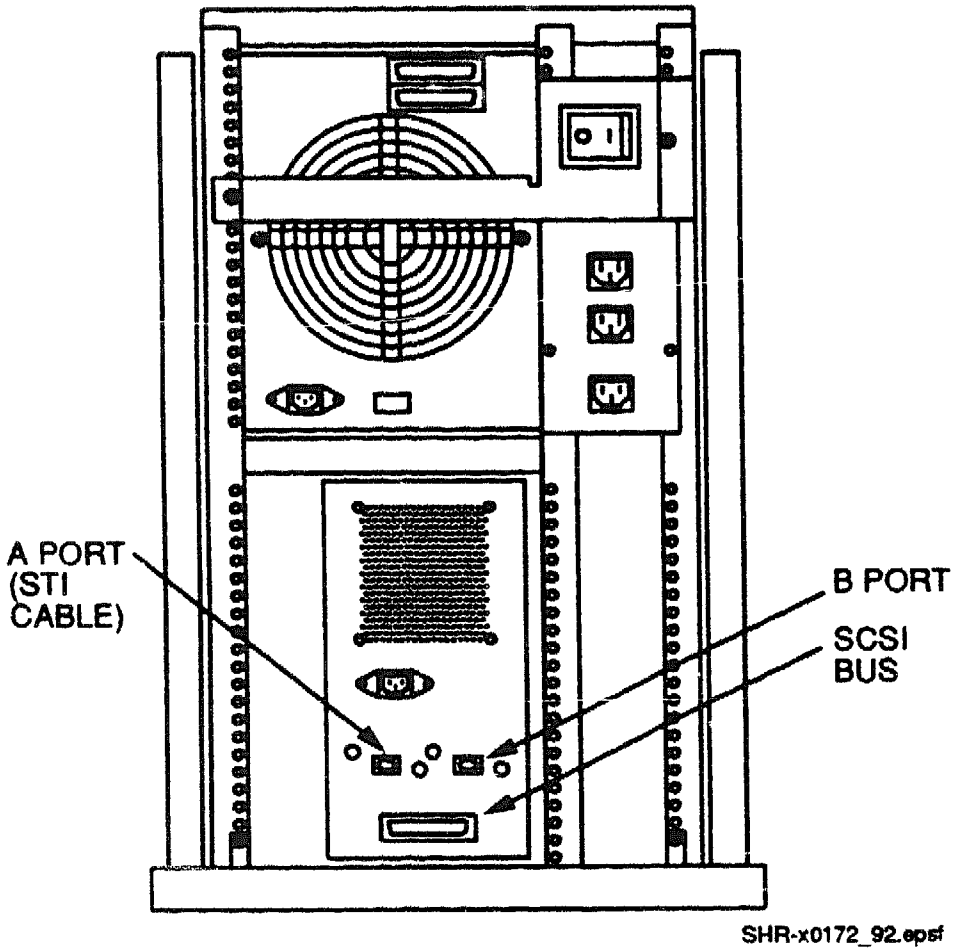
The SA106 storage subsystem contains one, 25-foot STI cable. You will need a second cable for dual applications.

Table 2–1 lists part numbers and cable lengths that connect to an SA106 storage subsystem.

Table 2–1 STI Interconnect Cables

Part numbers	Length
BC26V–03	0.914 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



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

Two diagnostics test the SA106 and TA867 subsystems:

- **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 disks 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 SA106 upper and lower panels:

Magazine Tape Subsystem

- Mode Select key
- Eject button and LED
- Load/Unload button and LED
- Slot Select button and LED
- Current Slot Indicators 0 through 6
- Power On LED
- Write Protected LED
- Tape in Use LED
- Use Cleaning Tape LED
- Magazine Fault LED
- Loader Fault LED
- Unit ID Label

SCSI/STI Adapter Assembly

- Port A switch and LED
- Port B switch and LED

- STI fault switch and LED
- Unit Number

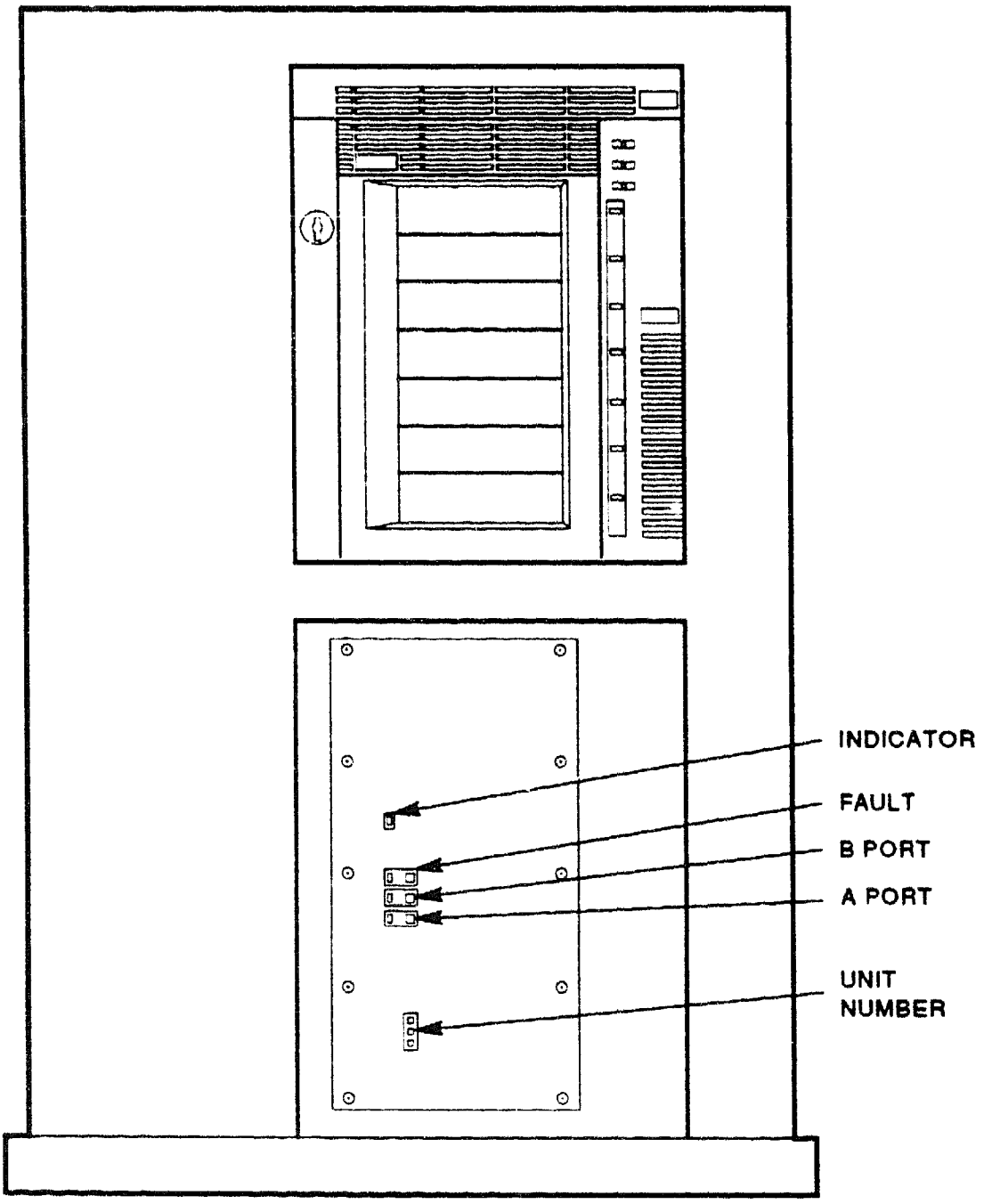
Table 4–1 lists the function and state of each control/indicator.

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 is detected in the formatter. Even though an error 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 completes its power-on self-tests (POST).
Unit number	DSA unit number
TA867	See the Tx867 Series Magazine Tape Subsystem Owner's Manual

Figure 4–1 shows the SA106 controls and indicators.

Figure 4–1 SA106 Controls and Indicators



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.