TM
SYSGEN   SC4000

INTELLIGENT TAPE CONTROLLER

INSTALLATION PROCEDURE

NOTE: All specifications are subject to change
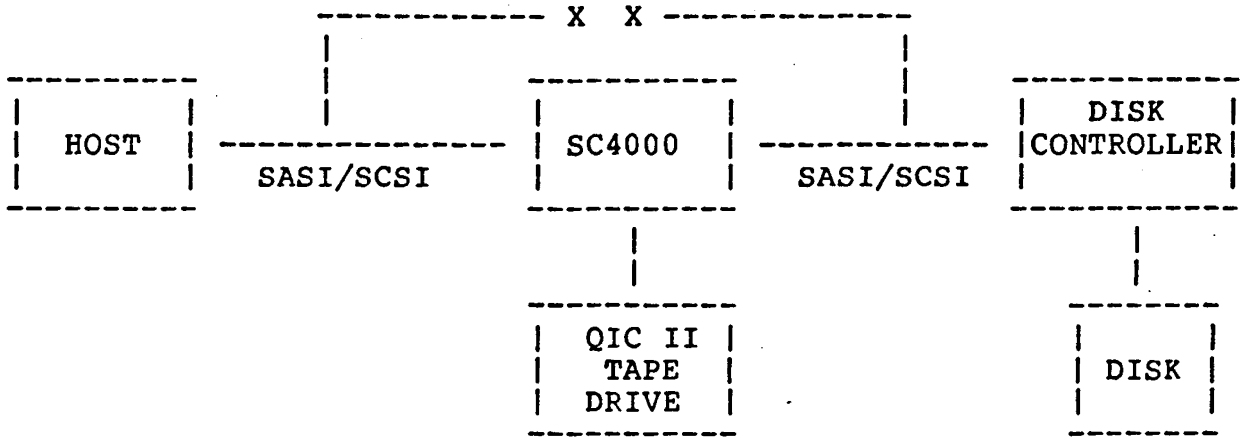   without notice.

REV	DESCRIPTION	DATE	CHNG	APPV
	RELEASE	6/11/83	NL	

DOC. NO. 4000-530-00

0.0 SCOPE

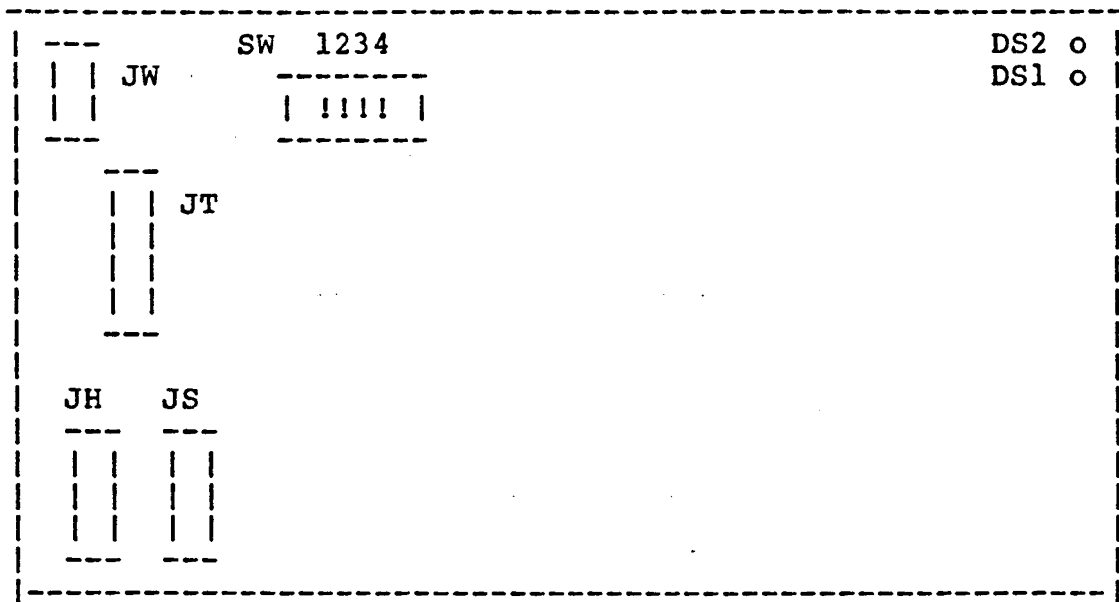This document outlines the installation procedures of using SC4000 intelligent tape controller.

SYSTEM CONFIGURATION

```
                    ------------ X   X --------------
                   |                               |
 ----------        |            ----------         |         ----------
|          |       |           |          |        |        |   DISK   |
|  HOST    | ------------------|  SC4000  |----------------- |CONTROLLER|
|          |       SASI/SCSI   |          |    SASI/SCSI     |          |
 ----------                     ----------                    ----------
                                    |                             |
                                    |                             |
                                ----------                    --------
                               | QIC II   |                  |        |
                               |  TAPE    |                  |  DISK  |
                               | DRIVE    |                  |        |
                                ----------                    --------
```

The broken path shown might have been the orginal system set up before installing SC4000 and QIC II tape drive.

1.0 USER GUIDE FOR HARDWARE SETUP

1.1 SC4000 board layout

```
 ----------------------------------------------------------------
|  ---            SW   1234                          DS2 o |
| |  | JW              --------                       DS1 o |
| |  |                |  !!!! |                             |
|  ---                --------                              |
|       ---                                                 |
|      |  | JT                                              |
|      |  |                                                 |
|      |  |                                                 |
|      |  |                                                 |
|       ---                                                 |
|                                                           |
|      JH    JS                                             |
|      ---   ---                                            |
|     |  |  |  |                                            |
|     |  |  |  |                                            |
|     |  |  |  |                                            |
|      ---   ---                                            |
|                                                           |
|----------------------------------------------------------------|
```

JW   4 pin power connector to power cable
                      where pin 1 is not connected
                              pins 2,3 are grounded
                              pin 4 connected to +5V

JT   50 pin 0.10" spacing connector to QIC II drive
JS   50 pin 0.10" spacing connector to DK controller
JH   50 pin 0.10" spacing connector to Host cable

DS1   ON to indicate there is an error condition
                      detected either by SC4000 or QIC II drive.

DS2   ON to indicate SC4000 is busy in processing a
                      command.

On-board switch setting is to define the controller selection
mode that the user chooses.

LUN MODE

For older SASI host adaptors not capable of selecting
different Controller IDs, this mode allows the host computer
to direct commands to the SC4000 by using an LUN between 4
and 7. To choose this mode of operation, set Key 1 on the
Dip Switch to ON. The LUN for SC4000 can be set as follows:

LUN	Key 1	Key 2	Key 3	Key 4
4	ON	ON	OFF	OFF
5	ON	ON	OFF	ON
6	ON	ON	ON	OFF
7	ON	ON	ON	ON

ID MODE

For host adaptors capable of selecting different Bus Devices
(a maximum of 8 under SCSI), this mode allows the host to
select the SC4000 controller by asserting the corresponding
Data Bus line in the Device Selection Phase. To choose this
mode of operation, set Key 1 on the Dip Switch to OFF. The
Controller ID for the SC4000 can be set as follows:

Controller ID	Key 1	Key 2	Key 3	Key 4
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON

1.2 INSTALLATION ON QIC II TAPE DRIVE

Make sure the tape drive is always strapped as #0 .
See tape drive product specification for such strapping.

1.3   CONTROLLER ID ADDRESS ON DISK CONTROLLER

If ID mode is chosen, the user should make sure ID address
for the disk controller does not conflict with either SC4000
or other devices on the SASA/SCSI bus.
If LUN mode is chosen, the disk controller and SC4000 both
have the same ID address.

See disk controller product specification for ID address
alternation if such need arises.

1.4   ADD SC4000 IN AN EXISTING DISK ONLY SYSTEM

1) Disconnect the original connection between the disk
    controller and the host.

2) Connect JH to the host.

3) Connect JS to the disk controller.

4) Connect JT to the QIC II tape drive.

2.0   HINTS FOR COMMON ERRORS ENCOUNTERED IN INSTALLATION

1) After power-up, the two LED's on SC4000 should always
    be cleared.

    - If not cleared, check host bus reset signal and input
    +5 to the board.

2) SC4000 is not responsive to any command from the host.

    - Check RESET, SELECTION, DBx, BUSY sequencing and
    timing requirement. (as shown in Product Specification
    4000-500- section 7.0)

    - Check DBx in the selection relfects the exact
    controller ID address on SC4000 or disk controller
    depending what is to be chosen.

    - Check cable connection to host.

    - Check cable connection to disk controller.

    - Check cable connection to QIC II drive.