HITACHI DK516

JUMPER PLUG INSTALLATION

The following jumpers are accessible to the user.

	Jumper	Pin No.
Setting of Terminator Module and Terminator Switches	JP4	1-4
	JP5	1-2
Drive Address Jumper	JP3	1-6
Write Protect Jumper	JP3	7-8
Synchronized Spindle Mode Select Jumper	JP2	1-4
Spindle Motor Control	JP2	5-6
Sector Mode Select Jumper	JP2	7-8
Sector Length Jumper	JP2	9-14
Seek Jumper	JP2	15-16

Terminator and Jumper Setting
Before this jumper plug installation/setting, please use ESD protected cushioning material for safer operation.

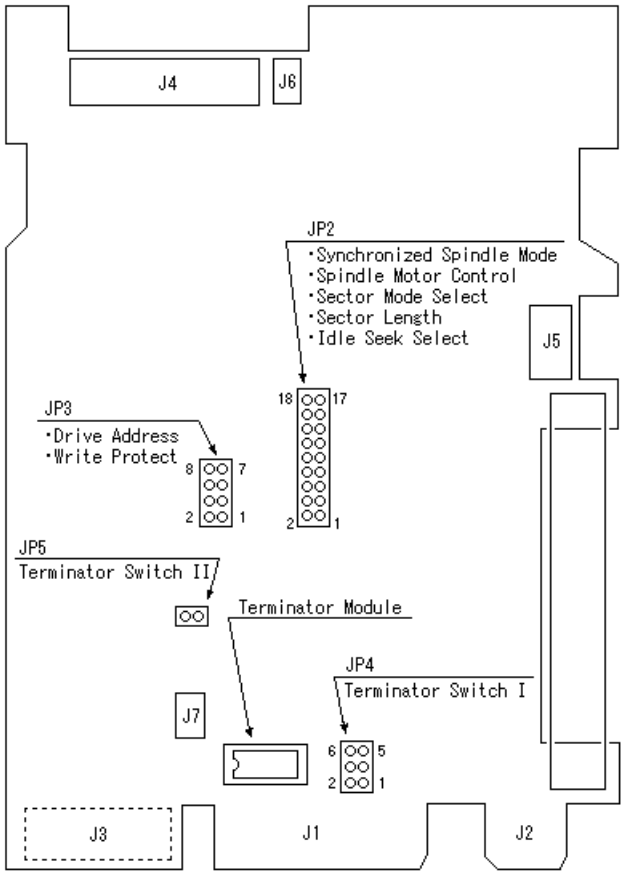
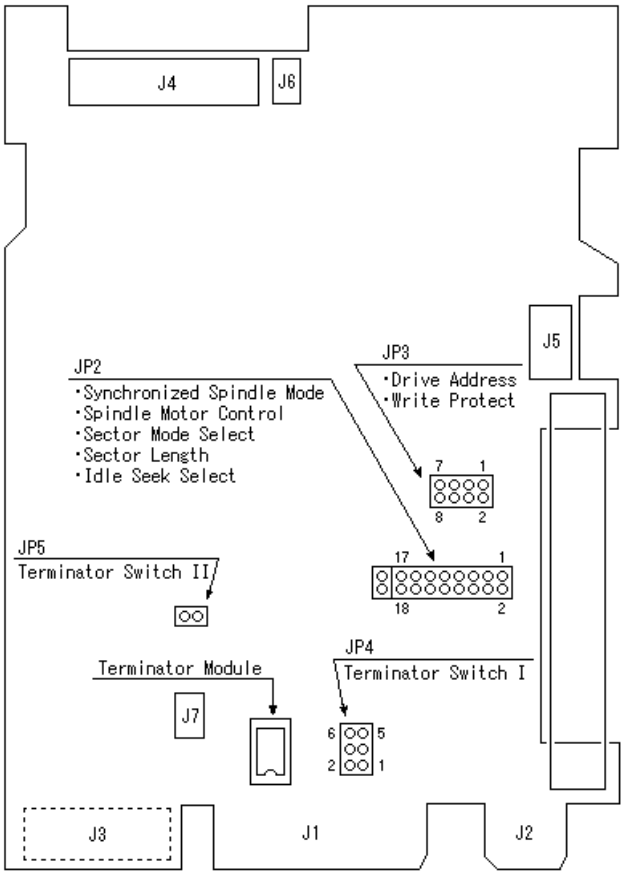


Fig. 2-7a SZ963 PCB Layout (PCB Rev. 1-).

IMPORTANT:
Black jumpers are unique to each drive and are set at factory. Never remove or tamper with black jumpers.

Fig. 2-7b SZ963 PCB Layout (PCB Rev. 7-).

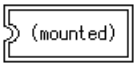
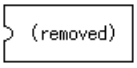
IMPORTANT:
Black jumpers are unique to each drive and are set at factory. Never remove or tamper with black jumpers.



Setting of Terminator Module and Terminator Switches

Control Signal
Each drive in Radial connection of cable B and the last end of the drives in Daisy Chain connection of cable B should be terminated.
Since a terminator module (TM) and Terminator Switch I (JP4) are provided to all drives as shipped, remove all of them except the last drive in case of Daisy Chain connection.

Table 2-1 Terminator Module and Terminator Switch I

Configuration	Terminator Module (TM)	Terminator Switch I (JP4, pin 1-6)
-Single drive on cable B -All drive in Radial connection -The last drive in Daisy Chain (Factory Default)		
-All drives except the last one in Daisy Chain		

* At the time of shipment, Terminator Module and Terminator Switch I are mounted on Terminator socket.

Synchronized Spindle Signal
Synchronized Spindle Signal is terminated via JP5 to terminator resistor on the PCB. When the synchronized spindle option is used, JP5 shall be removed except the last drive in Daisy Chain OF Synchronized.

Table 2-2 Terminator Switch II

Configuration	Terminator Switch II (JP5)
The last Slave drive (Factory Default)	
All drives except the last Slave drive	

* A drive as shipped is mounted with Terminator Switch II

Drive Address Jumper (JP3, Pin 1-6)

Drive address can be selected by using the jumper switch (JP3) the jumper setting and the selected Drive address is shown in table 2-3. Drive No. 0 is not used.

Table 2-3 Jumper Setting for Drive Address

Drive No.	None	#1	#2	#3
JP3 (pin 1-6)				

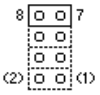
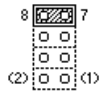
Drive No.	#4	#5	#6	#7
JP3 (pin 1-6)				

* At the time of shipment, Drive #1 is selected.

Write Protect Jumper (JP3, Pin 7-8)

Write operation of a drive is inhibited by setting a jumper on JP3, pin 7-8 (Write Protect mode), which condition will generate ATTENTION status upon receiving of WRITE GATE-N signal.

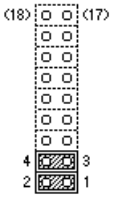
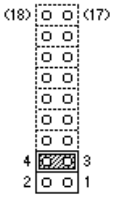
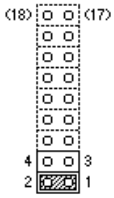
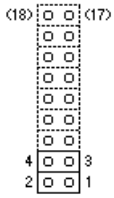
Table 2-4 Jumper setting for Write Protect

JP3 (pin 7-8)		
Function	Write Enable	Write Protect

Synchronized Spindle Mode Select Jumper (JP2, Pin 1-4)

Synchronized spindle mode can be selected by using the jumper switch. This Jumper Setting will be aborted by the following Set Configuration command. Set the jumpers, before turning on the DC power. For details, refer to "DK51X Winchester Disk Drive Synchronized Spindle Feature Specification".

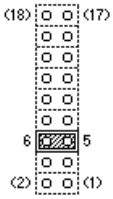
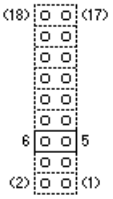
Table 2-5 Jumper Setting for Synchronized Spindle Mode Select

JP2 (pin 1-4)				
Function	Off Line (Factory Default)	Slave	Master	Remote

Spindle Motor Control (JP2, Pin 5-6)

This jumper switch will select the motor starting condition after power is turned on when the motor start/stop option is used (JP2, pins 5-6).
The jumper switch shall be set before power is turned on.

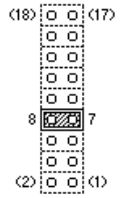
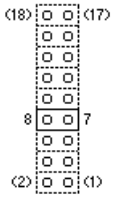
Table 2-6 Jumper Setting for Spindle Motor Control

JP2 (pin 5-6)		
Function	Off Line (Factory Default)	Stopped

Sector Mode Select Jumper (JP2, Pin 7-8)

Hard Sector mode issues SECTOR clock on J1-pin16 and J2-pin2.
In Soft Sector mode ADDRESS MARK FOUND-N is found on J1-pin16 and J2-pin2. "Set Configuration" command takes precedence over this Jumper Setting function.

Table 2-7 Jumper Setting for Sector Mode Select

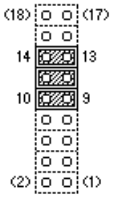
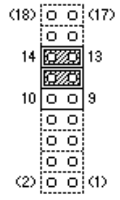
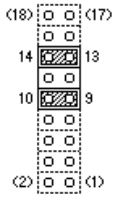
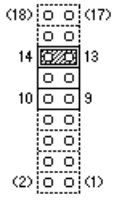
JP2 (pin 7-8)		
Function	Off Line (Factory Default)	Soft Sector

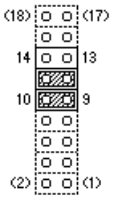
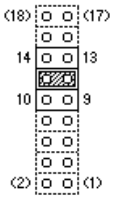
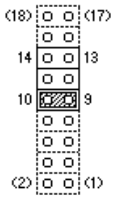
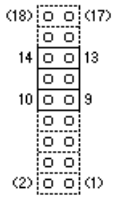
* In case of PCB revision is 0, "Soft Sector" mode is Selected.

Sector Length Jumper (JP2, Pin 9-14)

This Jumper Setting function is effective with Hard Sector mode. This Jumper Setting will be aborted by the only "SET BYTES PER SECTOR" command. All the applicable configurations of Bytes/Sector or Sector/Track are listed in Table 2-8.
Set the jumper(s) before on the DC power.

Table 2-8 Jumper Setting for Sector Length

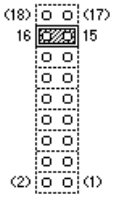
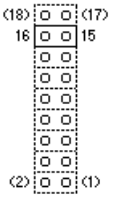
JP2 (pin 9-14)				
Bytes Per Sector	339	342	595	603
Sectors Per Track	135	134	77	76
Data Length	256	256	512 (Factory Default)	512

JP2 (pin 9-14)				
Bytes Per Sector	1119	2184	Not Used	
Sectors Per Track	41	21		
Data Length	1024	2048		

Idle Seek Select Jumper (JP2, Pin 15-16)

This Jumper switch can be set to enable or disable the Idle Seek function, that will move heads from the current cylinder to another cylinder, if no seek command has been accepted within 24 seconds.
The jumper switch shall be set before power is turned on.

Table 2-9 Jumper Setting for Idle Seek Select

JP2 (pin 15-16)		
Function	Not Supported (Factory Default)	Supported