Board number

13332117-000C / 15532117-XXX / SAN-S294VO / GCMK-103X

Jumpers D0, D1, D2 and D3

The D0 to D3 jumpers determine the *Drive Select* signal the drive should react to.

Only one of the jumpers must be placed.

For PC-AT interfaces only D0 and D1 will function, for Shugart interfaces D0 to D3 will work.

When using the drive in a system with PC-AT interface, it should be noted that the *Motor Enable* input signal is only taken from pin number 16. There are two options to handle this issues. The first option is to use a ribbon cable with a twist and place the D1 jumper on all drives. In this case the drive that is connected behind the twist will be drive 0 and the drive that is connected before the twist will be drive 1. The second option is to use a untwisted ribbon cable and shorting the pin number 10 and pin number 16 together, the D0 or D1 jumper of the connected drives can then be placed.

When using the drive in a systems with Shugart interface D0, D1, D2 or D3 can be placed to make it drive 0, drive 1, drive 2 or drive 3 respectively.

The jumper D1 will be placed in the default setting.

Jumpers DC and RDY

The DC and RDY jumpers select what signal shall be output on pin number 34.

When DC is placed the *Disk Change* signal will be used.

When RDY is placed the *Ready* signal will be used.

For PC-AT interfaces the DC jumper should be placed, this is also the default setting.

Jumper DLE

The DLE jumper influences the drives rotation speed as well as the head data filter.

When DLE is not placed the drives rotation speed and head data filter are not changed.

When DLE is placed and I is placed the drive will run at 300RPM regardless of the *Density Select* signal. When DLE is placed and I is nor placed the drive will switch to a lower data filter that is unable to read high density data.

This jumper is not placed in the default setting.

Jumper E2

The E2 jumper determines the behavior of the *Index* (pin number 8) and *Read Data* (pin number 30) output signals.

When the E2 jumper is not placed the following conditions will determine the *Index* and *Read Data* signals.

Index: Index hole detected, drive selected, ready state, seek completed

Read Data: Read data detected, drives selected, ready state, not writing, seek completed

When the E2 jumper is placed the following conditions will determine the *Index* and *Read Data* signals.

Index: Index hole detected, drive selected, ready state

Read Data: Read data detected, drives selected, ready state, not writing

Setting this jumper will generate *Index* and *Read Data* signals even when seeking is not completed. This might be required for systems that require 'masking the Index'. (e.g. Older systems that do not give the drive enough time to reach a ready state)

In the default setting this jumper is not placed.

Jumper FG

The FG jumper connects or disconnects the metal frame of the drive from the electrical ground line.

When FG is not placed the metal frame is isolated from electrical ground. The resistance between the frame and electrical ground will be at least 150 kOhm.

When FG is placed the metal frame is connected to the electrical ground.

This jumper is placed in the default setting.

Jumper HL

The HL jumper controls whether or or not the input on pin number 4 should be interpreted as *Head Load* signal.

When the HL jumper is not placed the signal will not be interpreted as *Head Load* signal.

When the HL jumper is placed the signal will be interpreted as *Head Load* signal.

If it is interpreted as *Head Load* signal, the automatic head loading will be disabled and only an active *Head Load* signal will activate the solenoid that actuates the magnetic heads.

This jumper should only be placed when the floppy controller generates a valid *Head Load* signal. It is not placed in the default setting.

Jumper HS

The HS jumper determines how the automatic head loading functions.

When the HS jumper is not placed the head will be loaded when the *Motor Enable* signal is active.

When the HS jumper is placed the head will be loaded when the *Motor Enable* and the *Drive Select* signals are active.

This jumper is not placed in the default setting.

Jumper I

The I jumper controls whether or not the drives rotational speed should depend on the density mode.

When the I jumper is not placed the rotational speed will always be 360 RPM.

When the I jumper is placed the rotational speed will be 360 RPM when the drive is in high density mode and 300 RPM when the drive is in low density mode.

See jumper DLE for exceptions.

For PC—AT interfaces the I jumper can be placed. This jumper is not placed in the default setting.

Jumper IS

The IS jumper determines the influence of the *Density Select* on the *Ready* signal.

When the IS jumper is not placed the *Density Select* signal will have no influence on the *Ready* signal.

When the IS jumper is placed the *Ready* signal will be reset whenever the *Density Select* signal changes.

For PC—AT interfaces this jumper should not be placed, this is also the default setting.

Jumper IU

The IU jumper controls whether or or not the input on pin number 4 should be interpreted as *In Use* signal.

When the IU jumper is not placed the signal will not be interpreted as *In Use* signal.

When the IU jumper is placed the signal will be interpreted as *In Use* signal.

If it is interpreted as *In Use* signal, an active *In Use* signal will turn the activity LED in the front panel on, no matter how U0, U1 and U2 might be placed.

This jumper should only be placed when the floppy controller generates a valid *In Use* signal. It is not placed in the default setting.

Jumper LG

The LG jumper determines how the *Density Select* (Pin number 2) input signal should be interpreted.

When the LG jumper is not placed a high signal on the *Density Select* pin switches the drive into high density mode and a low signal switches the drive into low density mode.

When the LG jumper is placed the behavior is inverted, a high signal on the *Density Select* pin switches the drive into low density mode and a low signal switches the drive into high density mode.

For PC-AT interfaces this jumper should not be placed, this is also the default setting.

Jumper ML

The ML jumper controls under what conditions the drive motor should turn on.

When the ML jumper is not placed the motor will only turn on when the *Motor Enable* signal is active.

When the ML jumper is placed the motor will turn on when either the *Motor Enable* is signal active or the activity LED is lit.

This jumper is not placed in the default setting.

Jumpers MX and $\overline{\text{MX}}$

The jumpers MX and $\overline{\text{MX}}$ define if the drive is in multiplex mode or if it is in regular drive select mode. In multiplex mode the drive is permanently active, as if its *Drive Select* signal was active.

When the MX jumper is placed the drive will function in regular drive select mode, only being active when its *Drive Select* signal is active.

When the $\overline{\text{MX}}$ jumper is placed the drive will always be active regardless of its *Drive Select* signal.

For PC–AT interfaces the MX jumper should be placed, this is also the default setting. When the MX/$\overline{\text{MX}}$ headers are not soldered, the default setting is implemented with a breakable trace on the backside of the PCB.

Jumpers U0 and U1

The U0 and U1 jumpers determine the behavior of the drives activity LED in the front panel.

When neither jumper is placed the activity LED will light up with the *Drive Select* signal.

When only U0 is placed no signal but the *In Use* signal (only when enabled) will light up the activity LED.

When U0 and U1 are placed the activity LED will light up when the *Drive Select* signal is active and the drive is ready.

In the default setting no jumpers are placed.