

# FDS RAM adaptor cable pinout

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## Diagram

Open-end view of the RAM adaptor's disk drive connector.



## Pin meanings

pin #	*2C33 pin	*RAM pins	I/O	signal description
1	50	5 (green)	O	/write
2	64	C (cyan)	O	VCC (+5VDC)
3	49	6 (blue)	O	/scan media
4	32	1 (brown)	O	VEE (ground)
5	52	3 (orange)	O	write data
6	37	B (pink)	I	motor on/battery good
7	47	8 (grey)	I	/writable media
8	-	-	I	motor power†
9	51	4 (yellow)	I	read data
10	45	A (black)	I	/media set
11	46	9 (white)	I	/ready
12	48	7 (violet)	O	/stop motor

notes on symbols

I/O: input/output

/ : Indicates a signal which is active on a low (0) condition.

\* : These are corresponding pinouts for the 2C33 I/O chip, and the other end of the RAM adaptor cable, which both are located inside the RAM adaptor.

† : The RAM adaptor does not use this signal (there is no wire in the cable to carry the signal). An electronically controlled 5-volt power supply inside the disk drive unit generates the power that appears here. This power is also shared with the drive's internal electric motor. Therefore, the motor only comes on when there is voltage on this pin.

## Signal Descriptions

### Pin 1 (Output) /write

While active, this signal indicates that data appearing on the "write data" signal pin is to be written to the storage media.

### Pin 3 (Output) /scan media

While inactive, this instructs the storage media pointer to be reset (and stay reset) at the beginning of the media. When active, the media pointer is to be advanced at a constant rate, and data progressively transferred to/from the media (via the media pointer).

### Pin 5 (Output) write data

This is the serial data the RAM adaptor issues to be written to the storage media on the "/write" condition.

## **Pin 6 (Input) motor on, battery good**

Applicable mostly to the FDS disk drive unit only, after the RAM adaptor issues a "/scan media" signal, it will check the status of this input to see if the disk drive motor has turned on. If this input is found to be inactive, the RAM adaptor interprets this as the disk drive's batteries having failed. Essentially, this signal's operation is identical to the above mentioned "motor power" signal, except that this is a TTL signal version of it.

## **Pin 7 (Input) /writable media**

When active, this signal indicates to the RAM adaptor that the current media is not write protected.

## **Pin 9 (Input) read data**

When "/scan media" is active, data that is progressively read off the storage media (via the media pointer) is expected to appear here.

## **Pin 10 (Input) /media set**

When active, this signal indicates the presence of valid storage media.

## **Pin 11 (Input) /ready**

Applicable mostly to the FDS disk drive unit only, the falling edge of this signal would indicate to the RAM adaptor that the disk drive has acknowledged the "/scan media" signal, and the disk drive head is currently at the beginning of the disk (most outer track). While this signal remains active, this indicates that the disk head is advancing across the disk's surface, and appropriate data can be transferred to/from the disk. This signal would then go inactive if the head advances to the end of the disk (most inner track), or the "/scan media" signal goes inactive.

## **Pin 12 (Output) /stop motor**

Applicable mostly to the FDS disk drive unit only, the falling edge of this signal would instruct the drive to stop the current scan of the disk.

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