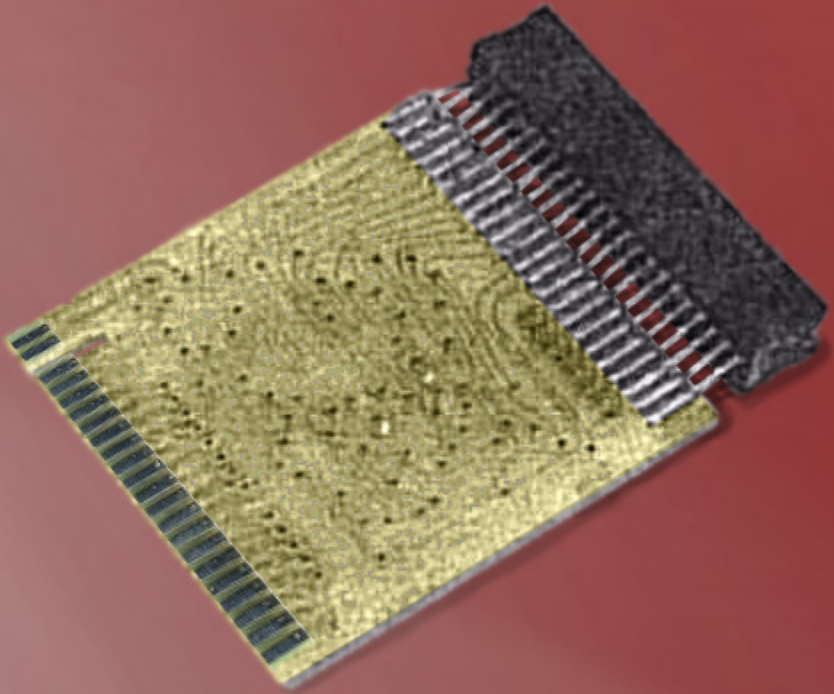
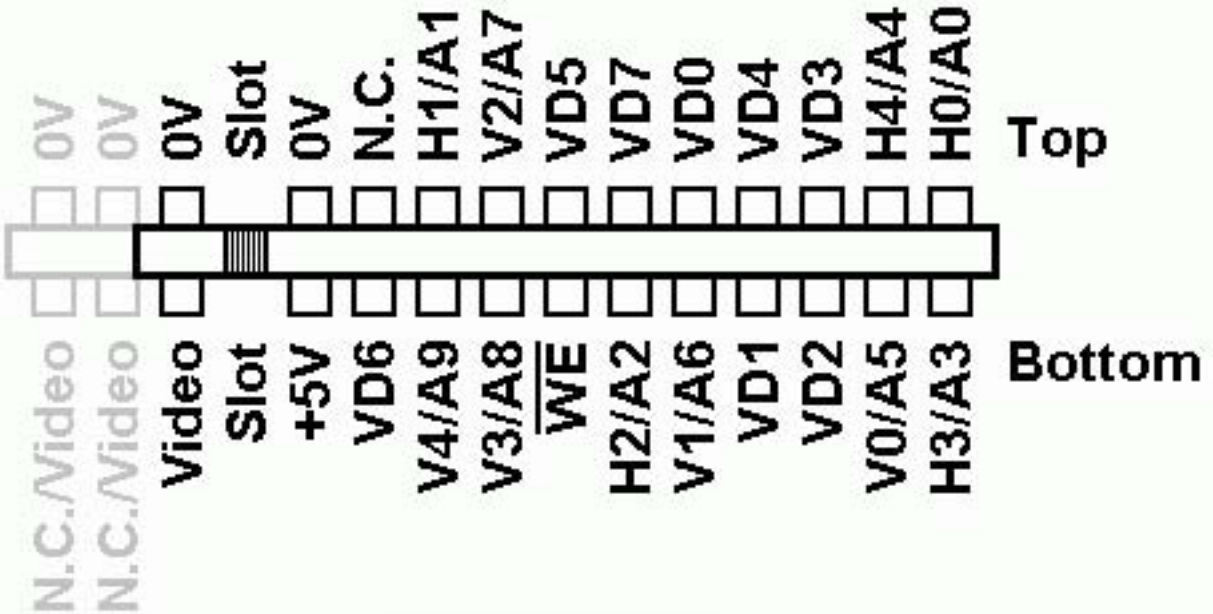


Jupiter Ace Video Connector



(REAR VIEW)

Plan de cablage A = dessus B = dessous

ACE	ZX	Signal	ACE	ZX	Signal
1A	–	–	1B	–	–
2A	–	–	2B	11A	INT
3A	7A	D6	3B	12A	NMI
4A	5A	D1	4B	13A	HALT
5A	17B	A0	5B	14A	MREQ
6A	5B	A7	6B	15A	IORQ
7A	6B	A8	7B	16A	RD
8A	7B	A9	8B	17A	WR
9A	8B	A10	9B	18A	BUSAK
10A	15B	A2	10B	19A	WAIT
11A	8A	D5	11B	20A	BUSRQ
12A	9A	D3	12B	21A	RESET
13A	10A	D4	13B	22A	M1
14A	13B	A15	14B	23A	RFSH
15A	12B	A14	15B	4B	A6
16A	11B	A13	16B	3B	A5
17A	10B	A12	17B	2B	A4
18A	9B	A11	18B	14B	A3
19A	18B	Horloge	19B	16B	A1
20A	23B	5V	20B	4A	D0
21A	22B	9V	21B	6A	D2
22A	–	–	22B	1A	D7
23A	19B+20B	0V	23B	–	–

INNOVONICS TRUMPCARD - INSTRUCTIONS

Trumpcard was originally designed as a mechanical and electrical link between the Jupiter Ace and ZX peripherals. To maintain flexibility and programmability the two connecting edges are quite separate. In this way the constructor can colour code and interrupt the signal lines as he pleases, both for experimental and permanent applications.

With the exception of the chip select lines, $\overline{WE}$ on the ACE and RAM/ROM $\overline{C.S.}$ on the ZX 81, both computers share the same bus albeit in a different configuration.

STANDARD CONSTRUCTION - GENERAL PURPOSE, ALL LINES CONNECTED

Trumpcard topside - Side A has the ZX polarising slot at top left. Side B is underside.

Connector Preparation

1. Bend connector pins outwards at their midpoint approx. 30°
2. Bend pins back to centre at their base, such that pinends leave just enough room to accept the Trumpcard PCB.
3. Ensuring pin ends are flat against PCB tracks, insert card and align right most pins (adjacent to connector polarising key) with Track 2 Side A.

Assembly

0.6mm single core connecting wire is recommended. Multicore wire is prone to causing shorts after soldering but can be used if necessary. If thin telephone wire is used, all lines can be routed through holes, otherwise construct as per instructions below.

1. Slide connector pins approx. 3mm over PCB tracks on the unslotted edge of the card leaving sufficient room to solder connecting wires. Check that the top row of pins is well clear of the bottom row, particularly at their bending point.
2. Taking care that the card lies parallel to connector body, tack solder the outermost pins on both sides to the PCB. This facilitates the soldering of the remaining pins, which should be held flush to the PCB tracks for a neater finish.
3. Prepare interconnection wires by paring off 3mm insulation at both ends.
4. Following the interconnection tables, assemble the underside first, starting at ACE 2B and working thru to 22B. 15B to 19B will need to be threaded under some of the control lines, in order to work through the tracks consecutively. Leave at least 4mm of track free on the ZX side to allow the peripheral to seat properly when applied.
5. Turn the assembly over, soldering from ACE 23A to 3A consecutively. Only 10T passes through a hole. Thread the remaining wires between connector body and PCB over its edge to side B.

N.B. Check your connections and inspect work for solder splashes.

TAKE PARTICULAR CARE TO CONNECT THE 9V LINE ACE 21A/ZX 22B CORRECTLY.

TTL chips carry a maximum 7V0 rating !!

TESTING

Having checked your wiring thoroughly, attach your peripheral to the card, then holding the card attach it to the ACE's Expansion port. Ensure both peripheral and ACE are on a stable flat surface. N.B. The ACE PCB polarising slot is slightly wider than the connector key itself. With the keyboard facing you and Trumpcard attached, push the connector firmly to the right of the slot - you may hear it click home. Check this point, as a perfectly wired card may not function if connector pins and ACE PCB tracks are slightly misaligned. Screen white-outs or a scrolling cursor indicate a poor or wrong connection.
I/O boards, D/A's, A/D's etc will require homegrown software to test them.
RAMpacks of 16, 32, and 64K will return unsigned RAMTOPS of 32768, 49152 and 65536 (screen display -32768, -16384, Ø respectively) by typing 15384 @ . which is the ACE's RAMTOP system variable. If the machine crashes, switch off, make necessary adjustments and switch on again. Unless the 9V line is wrongly connected, it is very unlikely that either the ACE or your peripheral is damaged. Check your assembly closely and all should be well.

ALTERNATIVE APPLICATIONS

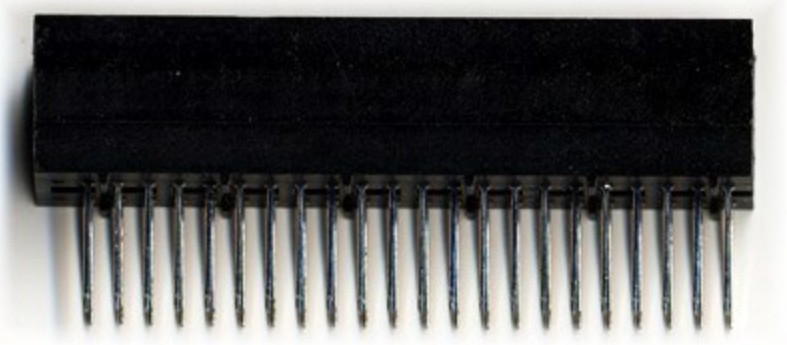
Trumpcard need not be used only on the ACE, similarly, the ZX tracks can be used to attach other types of connectors. E.G. Ribbon cable 0.05 and 0.1 pitch/ PCB header pins straight or right-angled on 0.1 centres/ wire wrap DIL sockets 0.3" and 0.6". Even 'D' Type subminiature Sockets/Plugs with solder bucket connectors will slip snugly over the PCB edge. The buckets themselves will have to be wired separately - they are not on the same pitch as the PCB tracks.

WIRING TABLE A = Topside B = Underside

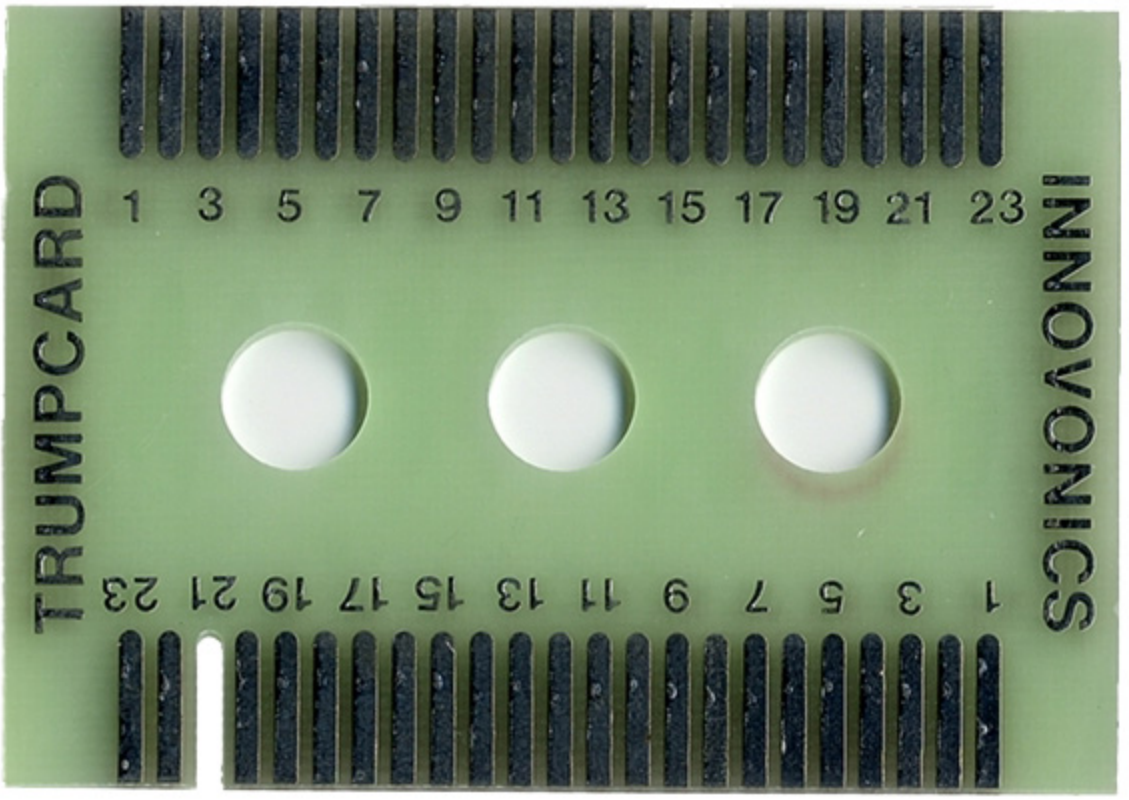
ACE	Wire Length	ZX Route		Signal
3A	2¼"	7A		D6
4A	2¼"	5A		D1
5A	2¼"	17B	Edge	AØ
6A	2¼"	5B	"	A7
7A	2¼"	6B	"	A8
8A	2¼"	7B	"	A9
9A	2¼"	8B	"	A10
10A	2"	15B	H2	A2
11A	1½"	8A		D5
12A	1½"	9A		D3
13A	1¼"	10A		D4
14A	2¼"	13B	Edge	A15
15A	2¼"	12B	"	A14
16A	2¼"	11B	"	A13
17A	2¼"	10B	"	A12
18A	2¼"	9B	"	A11
19A	2¼"	18B	"	ØCLK
20A	2¼"	23B	"	5V
21A	2¼"	22B	"	9V
22A	-	-	-	-
23A	2¼"	19B+20B	"	OV

ACE	Wire Length	ZX Route		Signal
1B		-	-	-
2B	2"	11A		INT
3B	2"	12A		NMI
4B	2"	13A	H3	HALT
5B	2"	14A	"	MREQ
6B	2"	15A	"	IORQ
7B	2"	16A	"	RD
8B	2"	17A	"	WR
9B	2"	18A	H2	BUSAK
10B	2"	19A	"	WAIT
11B	2"	20A	"	BUSRQ
12B	2"	21A	"	RESET
13B	2"	22A	H3	M1
14B	2"	23A	"	RFSH
15B	1¾"	4B		A6
16B	1¾"	3B		A5
17B	1¾"	2B		A4
18B	2"	14B		A3
19B	2"	16B		A1
20B	2¾"	4A	H1	DØ
21B	2¾"	6A		D2
22B	2¾"	1A		D7

Hole 1 is at left when card is viewed from top.
Trumpcard numbering system is independent of any ZX81 convention.



FACE A : Dessus.



FACE B : Dessous.