



DE9 Joystick

DE9 was the most common connector during the 1980s.

Pin	Atari 800 Atari VCS	Atari 7800 (*1)	Atari ST	VIC-20 C-64 C64GS (*2)	Amiga	CD32 (*3)	Amstrad CPC	MSX	Mastersystem (*4)	Megadrive (Genesis) (*4)	Saturn (*4)	Sinclair (*6)
1	Up	Up	Up	Up	Up	Up	Up	Up	Up	Up	GND	unused
2	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	common
3	Left	Left	Left	Left	Left	Left	Left	Left	Left	1Y (-, Left)	Up	unused
4	Right	Right	Right	Right	Right	Right	Right	Right	Right	2Y (-, Right)	VCC	Button
5	Paddle B	Button Right	Button 3	Button 3 (POTY)	Button 3 (POTY)	Shift Load OUT	Button 3	VCC	VCC (+5V)	VCC (+5V)	Select OUT 1	Up
6	Button	Button	Button 1	Button 1	Button 1	Fire, Clock OUT	Button 2	Button 1	TL (A)	TL (A, B)	Select OUT 2	Right
7	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	VCC (+5V)	Button 1	Button 2	TH (<i>unused</i>)	TH (Select OUT)	Right	Left
8	GND	GND	GND	GND	GND	GND	GND (Row 9) (*5)	Strobe OUT	GND	GND	Left	common
9	Paddle A	Button Left	Button 2	Button 2 (POTX)	Button 2 (POTX)	Serial Data IN	GND (Row 6) (*5)	GND	TR (B)	TR (Start, C)	VCC	Down

(*1) The Atari 7800 buttons require special wiring.

(*2) For the second button/right mouse button the POT X line is used (and for 3rd button/middle mouse button POTY), which - different to the other lines - must be pulled to VCC via the button.

(*3) The CD32 supports "game pad mode" and uses pin 5 to switch to it (it is pulled to active high by the CD32). Actual CD32 controllers have active components. Regular "atari" joysticks will work at the CD32, but CD32 controllers will not work at e.g. a C-64

(*4) The "SEGA" controllers can not be converted into "Atari" Joysticks simply by rewiring them. Unlike regular "Atari sticks" they contain pull-up resistors for each signal line (which might interfere with scanning the keyboard on C64) and some controllers may contain active circuits and will not work without the VCC. The Megadrive controllers use an active circuit. . The Saturn controllers also contain an active circuit and are wired up completely non standard.

(*5) The respective GND lines are pulled low to select the respective "row". Regular Joystick uses row 9.

(*6) Pinout refers to the "Interface Two" ("Sinclair" aka "+3")



