

COLECO ADAM – GENERAL FAQ

Consolidated edition - Technical Reference update - 08/15/2026

Purpose: Straight answers to common questions

Audience: Users, collectors, and developers

GENERAL

Q: What is the Coleco ADAM?

A: A Z80-based home computer system released by Coleco in 1983, designed as both a standalone computer and an expansion to the ColecoVision.

Q: Why is the ADAM considered unusual?

A: It uses bank-switched memory, a tape-based storage system (DDP), and a custom operating system (EOS), all of which differ from more common systems of the era.

Q: How do I power my ADAM?

A: The ADAM is unusual in that it was designed to be powered by its companion printer. You plug the printer into the AC outlet, then plug the printer into the ADAM. Enough people disliked this arrangement that various vendors produced standalone power supplies over the years. It was also fairly common, back in the day, to remove the power supply from the printer and use it as a standalone unit.

FIRST-TIME SETUP

If you have just acquired an ADAM, start with the simplest possible configuration. The goal is to establish that the computer, keyboard, video output, and power system work before adding storage devices or expansion hardware.

1. Before powering on

- Check the Memory Console, keyboard, printer/power supply, and cables for obvious damage, loose connectors, corrosion, or broken parts.
- If the system still uses the original Coleco arrangement, remember that the ADAM is powered through its companion printer. The printer plugs into AC power, and the printer then supplies power to the Memory Console.
- If a standalone replacement power supply is fitted, use the instructions supplied with that unit.
- For the first test, leave optional expansion cards and extra peripherals disconnected unless they are required by the installed power/video arrangement.

2. Minimum configuration

For a basic first test, use the Memory Console, keyboard, a working power source, and a video connection. You do not need a disk, DDP, or cartridge merely to see whether the computer starts.

Known-good baseline: ADAM + keyboard + video + power, with no unnecessary expansion hardware attached.

3. Which switch do I use?

The two front toggle switches select different startup modes:

- Left switch - ADAM computer mode (EOS). Use this for normal ADAM operation, SmartWriter, BASIC, disks, and DDPs.
- Right switch - ColecoVision mode (OS7). Use this to start a normal ColecoVision cartridge.

4. What does a normal ADAM boot look like?

In ADAM mode the system searches for bootable expansion ROM, disk, DDP, and compatible cartridge media. If no bootable media is found, it falls through to the built-in Electronic Typewriter. This is normal and does not mean the computer is broken.

Quick test: If the machine powers up, produces a stable display, accepts keyboard input, and reaches the Electronic Typewriter with no boot media present, you have established a useful basic working baseline.

5. How do I get BASIC?

SmartBASIC is not stored in ROM. It must be loaded from a Digital Data Pack, disk, or a modern storage device/image that contains SmartBASIC. This is different from machines such as the Commodore 64, where BASIC appears immediately at power-on.

Once you have established that the bare system works, attach one known-good storage device and boot a known-good SmartBASIC image or original SmartBASIC medium.

6. How do I attach modern storage or video?

Modern ADAM owners commonly replace or supplement original media and displays with newer storage and video interfaces. Because these products differ in wiring, device IDs, boot behavior, and installation requirements, follow the documentation for the specific device you have rather than assuming that all modern interfaces connect the same way.

- Storage: SD-based DDP/disk replacements, FujiNet, and other virtual-media devices can reduce wear on original DDPs and disks.
- Video: modern RGB/VGA/HDMI-style upgrades and adapters may provide a cleaner picture on current displays than the original RF/composite path.
- Add one device at a time. Confirm that the ADAM still boots normally before adding the next peripheral.

First-time rule of thumb: Get the bare machine working first. Then add storage, video upgrades, and expansion hardware one item at a time.

HARDWARE

Contributors: Geoff Oltmans

Q: What are the ADAM's specs?

- CPU: Zilog Z80 at 3.58 MHz
- Support processors: three Motorola 6801s at 1 MHz (memory & I/O, tape, and keyboard control)
- Memory: 64 KB RAM, 16 KB video RAM; 32 KB ROM
- Expansion: 3 internal slots, 1 cartridge slot, and a 62.5 kbit/s half-duplex serial bus

- Secondary storage: Digital Data Pack tape cassette, 256 KB
- Graphics: Texas Instruments TMS9928A, 256 × 192 resolution, 32 sprites
- Sound: Texas Instruments SN76489AN, 3 voices + white noise

Q: How many expansion ports does the ADAM have?

A: Three; all have different uses.

- Left – Modem, RTC (has IORQ, M1, etc., but only 8-bit address)
- Middle – Language Cards, 80 Column Cards (has the most signals; 16-bit address, CAS2, M1, and IORQ)
- Right – Memory Expansion (16-bit address and RA7, CAS1, CAS2, but no IORQ)

Q: What is ADAMNet?

A: ADAMNet was a 62.5k bps synchronous serial port that supports up to 16 devices. The ADAMNet layout planned by Coleco included DCBs (device control blocks) for 2 printers, 2 DDP drives, 4 disk drives, 1 modem, 1 hard disk drive, 1 80-column display adapter, as well as some other devices (see the EOS Programmer's Manual for more information). Another useful feature of ADAMNet was the ability of devices to perform DMA transfers to system memory. This freed the computer to run part of a program while allowing the system to load the next part. This is noticeable in several games, such as Super Buck Rogers, where additional game code and graphics can load transparently while the player continues playing. In addition, ADAMNet allows for storage devices up to 4 GB.

Q: Can I use ColecoVision controllers on my ADAM?

A: Absolutely!

Q: What is an SGM?

A: The Super Game Module is an expansion originally designed for the ColecoVision and later recreated by Opcode Games. It plugs into the ColecoVision expansion interface and adds extra RAM (32K) plus an AY-3-8910-style sound chip for enhanced games. In order to properly utilize the SGM, you need to modify your ADAM with the C88 fix.

Reference: <https://lundyelectronics.com/shared-files/778/>

Q: What is the memory layout?

A: Two switchable 32K regions, controlled by software.

Q: What is a Digital Data Pack (DDP)?

A: A tape-based storage medium similar to a cassette, used as the ADAM's primary storage device.

Q: Did the ADAM support disk drives?

A: Yes. Coleco produced disk drives that ran on ADAMNet. Later, third-party vendors produced enhanced products that also ran on ADAMNet.

Official Part Numbers

Product	Model / Part	Description
Expansion Module #1 (2600 Adapter)	Model 2405	Allowed users to play Atari 2600 game cartridges on the ColecoVision.

Product	Model / Part	Description
Expansion Module #2 (Driving Controller)	Model 2413	A steering wheel and foot pedal controller typically bundled with Turbo.
Expansion Module #3 (ADAM Computer)		The module that converted a ColecoVision into a full ADAM computer system.
Roller Controller	Model 2492	A trackball controller often bundled with Slither.
Super Action Controllers	Model 2491	Advanced hand controllers with four trigger buttons and a numeric keypad, bundled with Super Action Baseball.
5.25" Disk Drive	7817	The standard floppy drive for the system.
AdamLink Modem	7818	A 300-baud direct-connect modem.
64K RAM Expander	7816	Plugs into the internal slot of the Memory Console.
Digital Data Drive	2410	The high-speed tape drive mechanism.
AdamNet Cable	D013	Also used for the keyboard and printer connections.

SOFTWARE / OS

Q: What operating systems does the ADAM run?

A: OS7 (ColecoVision), EOS (ADAM), and CP/M 2.2.

Q: What is SmartWriter?

A: The built-in word-processing software included with the ADAM. On boot, you are taken to the electronic typewriter. Pressing ESC takes you into SmartWriter, the word-processing program.

Q: What is SmartBASIC?

A: SmartBASIC is the standard BASIC programming language interpreter for the Coleco ADAM home computer. Developed by Randall Hyde of Lazer Microsystems, it was designed to be mostly compatible with Applesoft BASIC to attract users familiar with Apple II software.

Unique Characteristics

- **Tape-Based Loading:** Unlike most 8-bit computers of the era (such as the Commodore 64), SmartBASIC was not stored in ROM. It had to be loaded into RAM from a Digital Data Pack each time the system was powered on, a process that took several minutes.
- **Applesoft Compatibility:** It shared many commands with Apple's version of BASIC, allowing users to port simple text-based programs with minimal changes. It was not 100% compatible with programs using system-level PEEK, POKE, or CALL commands because of the ADAM's different Z80 architecture.

- Gotcha – the "REM" Bug: A quirky bug in early versions caused programs to grow in size every time they were saved; an extra space was added after every REM or DATA statement, eventually leading to memory overflow if not manually corrected.
- Missing Features: Despite the ADAM having advanced sound and sprite capabilities, the initial version of SmartBASIC lacked built-in commands to control them easily, often requiring machine-language workarounds.

SmartBASIC 2.0

Instead of a commercial launch, Coleco officially released SmartBASIC 2.0 to numerous ADAM User Groups in late 1985. By distributing it this way along with other finished and unfinished software, the company essentially placed it into the public domain for the user community.

Key improvements in Version 2.0:

- Upgraded Operating System: It included EOS 7, an updated version of the Elementary Operating System with bug fixes and improved file handling compared with the original EOS 5.
- Enhanced Memory Support: It added the EXTMEM command, allowing programs to directly access the 64K Memory Expander (Model 7816) for significantly more programming space. Type EXTMEM; the system will reconfigure, then type PRINT FRE(0).
- Better File Management: Version 2.0 improved compatibility and speed when working with the 5.25" Disk Drive (Model 7817) and high-speed Digital Data Packs.
- Increased Compatibility: It further refined Applesoft BASIC compatibility, allowing better emulation of Apple II graphic modes such as HGR and HGR2.

Because it was distributed through user groups such as NIAD (Northern Illiana ADAM Users Group) rather than retail, copies are often found on user-made tapes or disks rather than in original Coleco retail packaging.

Important: SmartBASIC 2.0 is not upwardly compatible with the original SmartBASIC.

Q: What is SmartLOGO?

A: SmartLOGO was the Coleco ADAM's version of the Logo programming language, released around 1984. It was intended as an educational programming environment, especially for kids and schools, but it was capable enough for graphics, animation, sound, and game-like projects.

USAGE

Q: Why does the ADAM have two toggle switches?

A: Pulling the right-hand switch powers the computer up in ColecoVision mode (OS7) and attempts to start whatever cartridge is plugged in. Pulling the left-hand switch boots the computer into ADAM (EOS) mode.

Q: What is the exact ADAM-mode boot sequence?

A: The boot order is:

- (1) Expansion ROM Check
- (2) ID 4 (Disk 1)
- (3) ID 5 (Disk 2)

- (4) ID 8 (DDP 1)
- (5) ID 9 (DDP 2)
- (6) Cartridge (if ADAM-compatible)
- (7) Electronic Typewriter; ESC enters SmartWriter mode

If nothing is found above, the Electronic Typewriter in ROM is used.

(1) Expansion ROM Check

```
$8000 = $66
$8001 = $99
db $66, $99
; execution starts here, mapped at $8002
```

After it sees that \$6699 signature, the ADAM boot ROM loads HL with the normal continuation address and jumps to \$8002. Expansion ROM code therefore begins immediately after the two-byte header. To return to the normal ADAM boot path, jump through HL.

Important distinction: this is not the ColecoVision cartridge/test-cart \$55AA-style header. For an ADAM expansion ROM in the center/slot #2 expansion ROM space, it is \$66 \$99.

(2-5) Disk and DDP Boot

EOS does not initially look for a magic boot header on a disk or DDP. On reset it scans the storage devices in order: Disk 1, Disk 2, DDP 1, then DDP 2. The first device that reports usable media is treated as the boot device. EOS then reads logical block 0 from that media into RAM at \$C800, puts the boot device number in register B, and jumps directly to \$C800.

For a bootable disk/DDP, block 0 simply needs to contain executable Z80 boot code at its start. The EOS directory marker 55 AA 00 FF is a separate item found in the directory volume record, normally in block 1; it means “this has an EOS directory,” not “this is bootable.”

(6) ADAM-Aware Cartridge

An ADAM-aware cartridge is identified by its program code, not by a special ADAM-only cartridge header. It still boots like a normal ColecoVision cartridge: ROM mapped at \$8000-\$FFFF, a standard cartridge signature at \$8000-\$8001 (55 AA or AA 55 depending on convention/tooling), and the start vector at \$800A.

In the File Manager V3 example, the ROM starts with 55 AA and its start vector at \$800A points to \$802E. At \$802E it immediately performs ADAM-only setup:

```
DI
LD A,$0D
OUT ($7F),A
```

Port \$7F is the ADAM memory-map control port. The cartridge then copies code from cartridge ROM to ADAM RAM at \$0400, switches banks again with more OUT (\$7F),A instructions, copies a loader to \$C800, and jumps there. On a plain ColecoVision, \$0400 is BIOS ROM space, so that copy would not work as intended.

A better description is that an ADAM-aware cartridge still uses the normal ColecoVision cartridge header to get control, but its startup code assumes ADAM game mode and uses ADAM-specific memory banking, RAM, or EOS behavior. It does not need a special ADAM-only cartridge header.

DDP AND DISK USAGE

Q: With DDPs, what is Center Directory vs. Right Directory?

A: Center Directory and Right Directory refer to two different formatting/layout types used on Coleco ADAM Digital Data Packs (DDPs).

Center Directory DDP (most common)

- The directory, which tells the ADAM where files are stored, is physically located near the center of the tape.
- When the tape is at the directory, roughly equal amounts of tape are visible on both spools.
- This format supports the normal EOS filesystem (multiple files, CATALOG, etc.).
- Most blank DDPs, SmartBASIC, and third-party/homebrew software use this format.

Right Directory DDP (less common)

- The directory is located at the end (right side) of the tape.
- These are mostly used for Coleco "Super Games" and a few official titles (for example, Buck Rogers, Zaxxon, and Donkey Kong Super Game).
- When the tape is at the directory, almost all the tape is wound onto one spool.
- It often uses a more sequential/raw format, sometimes called GW format, without a full filesystem.

Quick visual check

- Center Directory: similar amounts of tape on both reels when positioned at the directory.
- Right Directory: almost all the tape is on one reel when positioned at the directory.

Coleco designed the Center Directory format for general data use and quicker directory access. Right Directory was optimized for large single-program Super Games that did not need a full filesystem. This distinction matters when creating or copying DDPs today; some tools ask you to choose HE (Center) or GW (Right) format.

Q: What software should I use to copy a physical DDP to a .ddp file? Should I use a block copy, and do I need to know whether the original is Center or Right Directory? – Patrick McHugh

A: Backup+ 3.0, Quickcopy v5.0, or File Manager v3.1 can be used. For ease of use and overall capability, File Manager v3.1 is recommended, especially because it supports four disk drives.

For a SuperADAM 2026 configured as described in the source material, the internal SD-DDP drive (cables connected to 1A and 1B) is Data Drive #1, and the external Digital Data Drive (2A and 2B) is Data Drive #2.

Knowing whether the original data pack is Center Directory (CD) or Right Directory (RD) helps. A CATALOG plus a look at the tape position can identify it: CD places the catalog near the center with roughly equal tape on both spools; RD places it toward one end. Programs supplied on CD include Coleco applications such as SmartBASIC and ADAMCalc, as well as post-Coleco releases. RD includes the Super Games (but not The Best of Broderbund) and, according to the source contribution, Richard Scarry.

On the internal SD-DDP drive, set the data-pack type with the MODE button and use the appropriate blank DDP image file. Two Super Games were supplied on short RD tapes: Donkey Kong and Donkey Kong Junior.

A standard backup works in most instances, but the source contributor prefers BLOCK COPY: copy blocks #00-255 from the original data pack in Drive #2 to starting block #00 of the data-pack image file in Drive #1.

Contributor: James Notini

Helpful reminder for new DDP users

- Disable any virtual drives where a physical drive has the same ID number.
- Gently clean the tape head with a cotton swab and isopropyl alcohol, then allow about five minutes to dry before starting the copy.
- Start with a blank DDP image file. Use the Center Directory version unless you are copying a Super Game that uses the Right Directory block format.
- Boot the ADAM with File Manager 3 and select MEDIA functions. Select the drive numbers and block numbers, then COPY BLOCKS 0-255.
- Some shorter tape titles have only blocks 0-127.
- Be careful not to overwrite the wrong drive ID and destroy the original tape.

Contributor: Shawn Merrick

DEVELOPMENT

Q: Did Coleco ever release a software-development tool for assembler, C, or Pascal?

A: Coleco France released a Macro Assembler Package in France (MACADAM), but its documentation showed how to assemble rather than providing complete development documentation. CP/M also includes an assembler, but it uses 8080 rather than Z80 syntax. The demonstrated calls are CP/M BIOS-style calls for routine terminal functions such as text output and clearing the screen. Assembly can also access capabilities such as TMS9919 sound and TMS9928A graphics, but that was not documented by Coleco in this material.

Q: Is it practical to develop software for the ADAM today?

A: [This answer was unfinished in both source FAQ versions and still needs completion.]

Q: What tools are commonly used?

A: Z80 assemblers (z88dk, TASM) and emulators.

Q: What is the biggest challenge in development?

A: Understanding memory mapping and working with storage formats.

ADAM Source Code and Development Repositories

Thomas Cherryhomes / tschak909 GitHub: <https://github.com/tschak909?tab=repositories>

One of the largest publicly available collections of Coleco ADAM-related source code, development tools, utilities, libraries, examples, and FujiNet-related projects. Useful starting points include eoslib, eos-tools, DDP-image tools, diagnostics, sample Z80 projects, and newer ADAM emulation work.

Currently Supported Emulation

The following emulators are currently maintained or actively supported and provide Coleco ADAM emulation:

Emulator	Platform / focus	ADAM support	Project URL
ADAM+ (ADAMP)	Windows / Linux; emulator + development toolkit	Coleco ADAM and ColecoVision; disk/tape image support and development- oriented features	https://github.com/dvdh1961/ADAMP
MAME	Cross-platform system emulator	Coleco ADAM machine emulation; useful for system- level development and hardware- behavior testing	https://www.mamedev.org/
ColecoDS Phoenix Edition	Nintendo DS / DSi family	ColecoVision and Coleco ADAM support; actively maintained Phoenix Edition	https://github.com/wavemotion-dave/ColecoDS

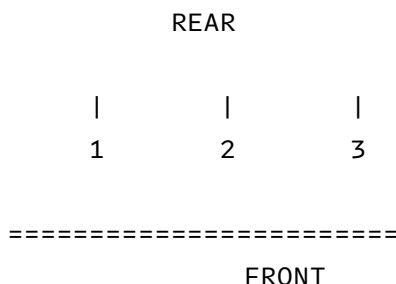
Notes: ADAM+ is a modern Qt6-based ADAM/ColecoVision emulator and development toolkit. ColecoDS Phoenix Edition is maintained by wavemotion-dave and explicitly supports ADAM. MAME remains the broadest general-purpose emulator of the three.

TECHNICAL REFERENCE

This section collects low-level hardware information useful for expansion-card, interface, and software development. The connector signal summaries below are based on the Coleco ADAM Technical Reference Manual and our slot comparison work.

Internal Expansion Connector Orientation

With the front of the Memory Console toward you, the three internal card-edge connectors are arranged left-to-right as #1, #2, and #3. The connector slots themselves run front-to-back (90 degrees to the front edge).



Internal Expansion Slots - Quick Comparison

Slot	Board Ref.	Typical Use	Address	Key Control Signals	Notes
#1 - Left	J7	Modem / RTC	BA0-BA7 (8-bit)	BWR, BRD, IORQ/BIORQ, BM1, INT	8 data lines (BD0-BD7). Best suited to I/O-oriented devices.
#2 - Middle	J6	Language cards / 80-column cards	BA0-BA15 (16-bit)	BWR, BRD, BMREQ, IORQ/BIORQ, BM1, INT	Most complete general-purpose internal connector; also exposes AUDIO IN.
#3 - Right	J5	Memory expansion	BA0-BA15*	BWR, BRD	8 data lines (BD0-BD7). *RA7 is substituted for BA7; no IORQ is listed for this connector.

Working shorthand from our comparison: Slot #1 is the I/O/modem-style slot, Slot #2 is the richest general-purpose slot, and Slot #3 is the memory-expansion slot.

Signal Groups by Internal Connector

Connector #1 (J7)

- BD0-BD7 - 8 bidirectional data lines
- BA0-BA7 - 8 address lines
- BWR - write strobe
- BRD - read strobe
- IORQ / BIORQ - I/O request, unbuffered / buffered
- BM1 - opcode-fetch indication
- INT - maskable interrupt input

Connector #2 (J6)

- BD0-BD7 - 8 bidirectional data lines
- BA0-BA15 - full 16-bit address bus
- BWR - write strobe
- BRD - read strobe
- BMREQ - memory request
- IORQ / BIORQ - I/O request, unbuffered / buffered
- BM1 - opcode-fetch indication
- INT - maskable interrupt input

- AUDIO IN

Connector #3 (J5)

- BD0-BD7 - 8 bidirectional data lines
- BA0-BA15 - 16 address lines, with RA7 substituted for BA7
- BWR - write strobe
- BRD - read strobe

External Expansion Port (P1)

The external Expansion Port is the 60-pin male card-edge connector on the right side of the Memory Console. It exposes a much broader set of CPU, video, audio, control, and power signals than any one internal slot.

Notation: The Technical Reference Manual prints active-low signals with an overbar. In this FAQ, '/' before a signal name means active low.

Pin	Signal / Function	Pin	Signal / Function
1	Ground	31	Audio input
2	Ground	32	Video input enable; +9 VDC
3	BD3 - tristate I/O	33	NTSC composite video input; 6 VDC, 1.5 VAC
4	BA14 - tristate output	34	GAME MODE RESET output
5	Y2 - LS138 decoder output	35	Sound chip 76489 disable; 0 VDC
6	Y1 - LS138 decoder output	36	Not in use
7	/HALT input	37	BA11 - tristate output
8	/BWR - tristate output	38	BA12 - tristate output
9	/NMI input/output	39	VDP Sync/Reset input
10	SPINNER INT DISABLE input	40	BIORQ - tristate output
11	BUSRQ input	41	Not used
12	BD1 - tristate I/O	42	Not used
13	Z80 Reset input	43	BA15 - tristate output
14	BD0 - tristate I/O	44	BA3 - tristate output
15	BM1 - tristate output	45	B0 3.58 MHz clock
16	BD7 - tristate I/O	46	BD2 - tristate I/O
17	BD6 - tristate I/O	47	BA0 - tristate output
18	BA1 - tristate output	48	BD5 - tristate I/O
19	BD4 - tristate I/O	49	BRFSH - tristate output
20	BA2 - tristate output	50	WAIT input
21	BA4 - tristate output	51	INT input

22	BA13 - tristate output	52	BUSAK output
23	BA5 - tristate output	53	BRD - tristate output
24	BA6 - tristate output	54	BMREQ - tristate output
25	BA7 - tristate output	55	IORQ output
26	BA8 - tristate output	56	AUDIO 76489 RDY output
27	BA9 - tristate output	57	+12 V
28	BA10 - tristate output	58	+5 V
29	AUX DECODE 1 input	59	+5 V
30	AUX DECODE 2 input	60	-5 V

MIB238 Multi-Interface Board

The MIB238, designed by Eric Pearson, is a modern 5 V redesign of the Micro Innovations MIB3. It installs in internal Expansion Slot #2 and provides a BOOT PROM socket, two RS-232 serial ports, a Centronics-style parallel printer port, and a memory-expansion addressor connection.

RS-232 Ports

The standard MIB238 provides two serial headers with different roles. J1 is the TERMINAL port (Serial Port 2), intended for a terminal or serial printer. J2 is the MODEM port (Serial Port 1), intended for a modem. Because the two ports represent opposite RS-232 roles, their handshake wiring is not identical.

Signal	J1 TERMINAL header	DB-25 pin	J2 MODEM header	DB-25 pin
DTR	11	6	14	20
RTS	9	5	7	4
Carrier Detect (DCD)	15	8	15	8
DSR	14	20	11	6
CTS	7	4	9	5

Important: do not assume that the TERMINAL and MODEM headers use interchangeable cables. The terminal side is wired so that a terminal-type device can be connected without adding an external null-modem adapter.

Parallel Printer Port

The parallel interface uses a 26-pin board header and is cabled to a standard 36-pin Centronics printer connector. This is the relevant cable mapping for attaching a conventional parallel printer such as an Epson dot-matrix printer.

MIB238 header pin	Signal	Centronics pin
1	/STROBE	1
2	Ground	19
3	Data 1	2
4	Ground	20
5	Data 2	3
6	Ground	21
7	Data 3	4
8	Ground	22

9	Data 4	5
10	Ground	23
11	Data 5	6
12	Ground	24
13	Data 6	7
14	Ground	25
15	Data 7	8
16	Ground	26
17	Data 8	9
18	Ground	27
19	NC	10 (ACK)
20	Ground	28
21	Printer BUSY	11
22	Ground	29
23	PE / Paper Out	12
24	Ground	30
25	SLCT / Select	13
26	NC	31 (RESET)

The documented parallel interface does not use Centronics ACK or RESET. The working signals are STROBE, eight data lines, BUSY, Paper Out, Select, and the associated grounds.

Programming Note

The MIB3/MIB238 serial interface is based on the SCN2681 DUART family. The MIB I/O base address is \$10. Port A corresponds to Serial Port 2 (TERMINAL) and Port B corresponds to Serial Port 1 (MODEM).

Reference URLs

MIB238 project and documentation: <https://github.com/epearsoe/MIB238>

Original Micro Innovations MIB3 documentation:
<https://www.colecovisionadam.com/Coleco/adam/Documents/MI%20MIB3%20Documents.pdf>

ADAM Z80 Bank-Switched Memory Map

The Z80 sees a 64K address space divided into two independently selected 32K windows. The low nibble of the memory-configuration value selects the source mapped into each window.

Z80 address range	Window
0000-7FFF	Lower 32K window
8000-FFFF	Upper 32K window

Bank-switch value:

- bits 1-0 = lower 32K source
- bits 3-2 = upper 32K source

Lower 32K source - bits 1-0

Bits	Source mapped at 0000-7FFF
00	Boot ROM / SmartWriter-Alpha path
01	Internal RAM 0000-7FFF
10	Expansion RAM 0000-7FFF
11	OS7 ROM + internal RAM 2000-7FFF

Upper 32K source - bits 3-2

Bits	Source mapped at 8000-FFFF
00	Internal RAM 8000-FFFF
01	Auxiliary / expansion ROM slot
10	Expansion RAM 8000-FFFF
11	ColecoVision cartridge ROM slot

All 16 memory configurations

Value	Lower 32K	Upper 32K
00	Boot/SmartWriter path	Internal RAM
01	Internal RAM	Internal RAM
02	Expansion RAM	Internal RAM
03	OS7 + RAM	Internal RAM
04	Boot/SmartWriter path	Aux/expansion ROM
05	Internal RAM	Aux/expansion ROM
06	Expansion RAM	Aux/expansion ROM
07	OS7 + RAM	Aux/expansion ROM
08	Boot/SmartWriter path	Expansion RAM
09	Internal RAM	Expansion RAM
0A	Expansion RAM	Expansion RAM
0B	OS7 + RAM	Expansion RAM
0C	Boot/SmartWriter path	Cartridge ROM
0D	Internal RAM	Cartridge ROM
0E	Expansion RAM	Cartridge ROM
0F	OS7 + RAM	Cartridge ROM

Control ports / selectors

Port / operation	Function
7Fh / decoded range 60h-7Fh	Memory configuration output
OUT 3Fh,0	Selects SmartWriter side when lower selector = 00
OUT 3Fh,2	Selects EOS / boot-ROM side when lower selector = 00
42h	Expansion RAM bank number for expansions larger than 64K

Technical note: The selector is commonly discussed as a 4-bit value 00h-0Fh. The lower and upper windows can therefore be changed independently.

Source Note

Primary hardware source: Coleco ADAM Technical Reference Manual, Preliminary Release, Chapter 2. Expansion Port: section 2.1.8. Internal connector interconnects: sections 2.1.9b-2.1.9d.

Console5 TechWiki copy of the Coleco ADAM Technical Reference Manual:

https://wiki.console5.com/wiki/File:Coleco_ADAM_Technical_Reference_Manual.pdf

MIB238/MIB3 references are listed in the MIB238 subsection above.

TROUBLESHOOTING

[Section reserved for future additions.]

COMMUNITY / DOCUMENTATION

[ADAM Archive \(documents and software\)](https://adamarchive.org/archive/) - <https://adamarchive.org/archive/>

[AtariAge forums \(community knowledge\)](https://forums.atariage.com/forum/115-colecovision-adam/) - <https://forums.atariage.com/forum/115-colecovision-adam/>

[MAME emulator documentation](https://docs.mamedev.org/) - <https://docs.mamedev.org/>

NOTES (FOR EXPANSION)

Future sections suggested in the source files:

- Disk/DDP overview
- EOS basics
- Example workflows